# Clinical Lectures
## ON
# DISEASES OF THE CHEST.

*Delivered at Charing-cross Hospital.*

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## LECTURE VIII.—PART II.

### ON CONCURRENCE OF THE RESPIRATORY AND CARDIAC MOVEMENTS—SPHYGMO-PNEUMAL SYNCHRONISM.

AND now, gentlemen, let us return to W. B——; and let me introduce you to some very curious phenomena that occurred in this case in connexion with the heart's rhythm, the like of which, at that time, I had never seen in any other case.

On Tuesday, January 5th, when in the hospital, I was requested to go up into the Bow ward and see this patient, as he was supposed to be dying. I found him very pallid and breathing with great hurry and labour, and on listening to his heart I found, to my astonishment, two things: first, that it was beating very slowly; and, secondly, that its pulsations exactly coincided with the respiratory movements—a breath for a beat, and breath for a beat—in unbroken and most exact correspondence, the inspiration and expiration corresponding to the two sounds of the heart. I thought there must be some mistake, and that the impression must be deceptive, and felt the pulse; but this only showed that my first impression was correct. I counted both pulse and respirations, and found them each exactly 58 in a minute; their coincidence could even be seen, the visible fluctuation in the cardiac region having the same relation to each respiratory movement of the entire chest-wall. The effect of feeling the pulse while you looked at the breathing was very curious; it seemed as if each respiratory act was pumping the blood into the radial artery, so exactly did the one coincide with the other, and I believe that any uninitiated person, feeling the one and watching the other, would have come to that conclusion. My clinical clerk, Mr. Conolly, observed the phenomena with me, and was equally struck with them. This you see, gentlemen, amounts to the reduction of the pulse-respiration ratio to a unit, for the fraction $\frac{58}{58}=1$, a thing I never before saw in my life.

The next day another curious state of things awaited me. I found, as before, an exact coincidence between the movements of the heart and lungs, but now there were exactly two beats of the heart to one respiratory act, instead of one-and-one as before; one complete beat going to inspiration and the next to expiration. Now I should think nothing of such a thing continuing for a short time, for a dozen beats or so; but it did not cease at a dozen beats, or at any number of beats. I should think nothing of two horses in a carriage trotting step for step together for a hundred yards (except that they were remarkably well matched horses), but if they *never* trotted anything else *but* together I should conclude there was some concert between them. As long as I felt the pulse I could not separate two pulsations from one respiratory act, so that it seemed as if there was an inspiration-pulse and an expiration-pulse. What was the most striking thing of all, and showed that the coincidence was not accidental, was that the rate of the pulse and breathing was by no means constant, at one time being considerably faster, at another slower, and yet in spite of this variation they remained exactly together. This left me no doubt that the rate of the one depended on the rate of the other, although which was the regulator, and which the one influenced, it left undetermined. I should think most likely that the breathing accommodated itself to the heart's action rather than *vice versâ*, as breathing is voluntarily regulable, and the heart's beat not. There was a great deal of præcordial distress, and the boy may have been involuntarily conscious of his heart's rhythm, and somehow the accommodation of the respiratory movements to its beat may have tended to mitigate his distress, and so have been instinctively prompted. However that might be, the rate of the one was clearly influenced by the other. My friend Mr. Conolly also observed *this* phenomenon with me.

The next day another curious change awaited me; there was no longer any connexion between the heart's action and the respiration, but the heart itself had taken up a curious rhythm, such as I never remember to have observed before. The beats went in couples, two being close to one another, and then two more. It could neither be called an irregularity nor an intermission. It was certainly not an irregularity, for it was singularly regular; and it was not an intermission, for there was not a sufficient lapse of time between the "couples" for a suppressed beat to be inserted. As far as I could make out from repeated observations, the intervals between the couples were half as long again as the two beats of the couple were from each other; counting rapidly and regularly, I found that if I counted two from one beat to another of a couple, I counted three from the last beat of a couple to the first of the next. This peculiarity was first observed on Thursday, Jan. 7th; on the 8th it was still maintained. On the 12th the peculiarity of the pulse had ceased; it then merely intermitted about every fourth beat. What fluid there had been in the pericardium appeared to have been completely absorbed, as the apex beat had become clear; it was to the left of its natural position, and the impulse of the heart was heard loud all over the chest. On the 13th all intermission of the pulse had ceased.

The patient continued to improve, and left the hospital with very little dyspnœa, and no physical sign but that of mitral regurgitation, at the latter part of March.

You will observe, gentlemen, in this interesting case, two very distinct things: one, an unbroken and evidently not accidental, correspondence between the cardiac and respiratory movements; the other, the assumption of a peculiar rhythm on the part of the heart itself. I have since seen the counterpart of both these phenomena in other cases. Let me relate them to you.

One day in last June—I have not noted the day—I was called to see a gentleman, recently come from the Continent, who had suffered for five years past from recurrent attacks of profuse hæmoptysis. I found him with all the symptoms and appearance of advanced phthisis. On examining the chest, I found the left side fallen in, front and back, with very little movement; large cavitory sounds existed above; below, bronchial respiration in front, hardly any behind. Percussion was dull everywhere on the left side, except in front above, where it was tympanitic. From the extent of the cavitory sounds, I inferred that the cavity at the left apex was not less than two inches in diameter every way. The heart was drawn upwards, I suppose by adhesions and the contraction of the cavity, so that the apex beat at the fourth interspace; the heart's impulse was plainly felt, and loud as high as the second interspace. There was no cardiac murmur of any kind. Pulse 99; respiration 33; pulse-respiration ratio therefore one-third exactly.

While I was listening to the heart I was struck with the uniformity with which the heart's action and the respiration coincided, and on turning my attention to this point I found there was, in fact, an unvarying coincidence, there being exactly one respiration to every three beats of the heart. Of these three beats one coincided with the inspiration, and the remaining two with the expiration and pause. I listened for some time, thinking that the coincidence was accidental, and would soon be broken; but I waited in vain for any break, and the longer I listened the more satisfied was I that the thing was not accidental, but that the patient was unconsciously regulating his respiration by the action of his heart. After listening some time, and getting quite tired of doing so, I ceased for a while, with a view of renewing the observation, and seeing if I again found it so. On again applying my ear to the stethoscope, there was the same unvarying correspondence—inspiration to beat one, and expiration and pause to beats two and three. I then asked the patient if he was breathing purposely at the exact rate he was, and if he adopted that particular rhythm from finding it fall in with the heart's movements, and I endeavoured to make him understand what I had observed. But he said he was not aware of the movements of the

heart, and that he breathed as he did simply because it was the rhythm and rate that unconsciously suggested itself to him.

I have seen one if not two other cases in which the same thing temporarily existed, but unfortunately I have not preserved notes of them.

The explanation of this curious phenomenon which I am disposed to adopt is that which I have just suggested—that it is an accommodation of the respiratory movements (perhaps quite unconsciously to the patient) to the movements of the heart. In both the instances that I have related there was an unnatural "solidarity" between the lungs and the heart, and the lungs would probably be from this circumstance abnormally perceptive of and affected by the heart's movements. For in W. B——'s case the event proved, as I shall presently relate to you, that at the time my observations were made the pericardium had become universally adherent, while pleurisy had partially agglutinated it to the lung; and in my phthisical patient there is reason to believe, from the heart's being dragged upwards, that the lung in the neighbourhood of the cavity had become adherent to the pericardium. Now under such circumstances one can conceive that the adaptation of the respiratory movements to those of the heart would tend to prevent the drag or jar that the unnatural connexion of the two organs might render their independent movements mutually productive of. The effect would be exactly the same as "rising to the trot." Lungs that rose to one beat of the heart and fell to the other would be less perceptive of the heart's movements than if the relation between them was irregular. It would tend to prevent the kind of thing that gives rise to the "beat" in musical vibrations—the movements being at one moment concurrent, at the next opposed. I think some such explanation as this must be the true *rationale* of the phenomenon, however unconscious the individuals who exhibit it may themselves be of it. Such a concurrence might result from movements entirely automatic in their nature.

Now what name shall we give to this curious clinical fact?—for we must call it something or other, or else resort, whenever we speak of it, to a long and inconvenient periphrasis. I have a great horror of anything pedantic, or that appears pedantic, and a great liking for giving expression to my ideas in simple vernacular whenever I can; nevertheless, in spite of this antipathy and this proclivity, I would venture to suggest for this concurrence of the respiratory and cardiac movements the sesquipedalian name of "sphygmo-pneumal synchronism." The name expresses exactly what the thing is, and I doubt if it can be conveyed more concisely.

And now let me relate to you two more instances in which I have met with the counterpart of the other phenomenon of Wm. B——'s case—namely, the couple-rhythm of the heart's pulsations.

William Br——, aged twenty-seven, a hautbois player in a military band, married, temperate, and always healthy up to four months ago, was admitted into Charing-cross Hospital with symptoms of heart disease, which had insidiously come on at the date mentioned, without any apparent cause, and gradually increased from that time. He was under my colleague Dr. Silver's care as an out-patient, and first came under my observation from Dr. Silver kindly requesting me to see him, that I might witness a very peculiar derangement of the heart's rhythm that the case presented. On stripping the man and inspecting him this perturbation of the rhythm was at once conspicuous; two cardiac impulses were seen to succeed each other rapidly, and then a pause succeeded, followed by another pair of impulses, and so on. These impulses, thus running in couples, were very conspicuous, not only in the præcordial region, but also at the root of the neck, where the pulsations of the large vessels accurately registered them. The first impulse of each pair was the stronger of the two; and my first impression was that the two represented a single action of the heart—that the first was a systolic impulse, and the second a diastolic. On applying the stethoscope, however, this impression was at once dissipated; for it was found that each of the two impulses was accompanied by an identical murmur, and that this murmur was itself a double one—double aortic. It was clear, therefore, that the second as well as the first of each pair of impulses was caused by the ventricular systole, and represented an independent heart's beat. The pulsation at the wrist, due to the second beat, was decidedly weaker than that due to the first. The interval between the pairs, though greater than that between the pulsations of each pair, was not twice as great; so that it was evidently not an intermission of every third beat. The man consented to come into the hospital, so that I had ample opportunity, as some of you had, of observing this remarkable rhythm. After existing for a few days it ceased, and never reappeared, being substituted by an occasional intermission.

A third case, the counterpart of this last, came under my observation in my private practice two years ago, in a young lady then thirteen years of age. The case is an interesting and remarkable one in many ways; but I will only read you from my private Case-book those parts of its history that refer to the heart's rhythm.

"..... The next thing that struck me was the violence of the heart's action. The next, its peculiar rhythm; the visible impulse appeared to be duplicate, one impulse immediately succeeded by another—two close together, and then an interval—two close together and then an interval; and so on. This was not only visible at the seat of the heart's impulse, but at the great vessels at the root of the neck, where, however, the second pulsation was seen to be decidedly weaker than the first. On feeling the pulse it was at once found that the pulsations at the wrist, though quite regular, were much fewer than the visible ones at the heart, and on checking them carefully they were found to coincide with the first of each pair of pulsations, and to be 56 in a minute, the second of each pair not being recorded at the wrist at all. The question then arose, what was the nature of the two impulses, and what was their relation to one another? In point of rhythm they resembled an ordinary systole and diastole of a slow-beating heart, and the single pulsation at the wrist, accompanying the first of each pair, confirmed that interpretation. But the murmur was so exactly the same at each of these pulsations that I could not but believe that they were identical in their nature.

"May 2nd.—On first listening to the heart this morning I found the same peculiar rhythm which I have already described, the murmurs as well as the impulses and the arterial pulsations going in couples. The rhythm is in triple time, two impulses succeeding each other at 1 and 2, and then at 3 there being a pause. It had all the character of ordinary systolic and diastolic rhythm; nevertheless it was quite certain, from the apex impulse and pulsation of the carotids, that each was a systole. There were about 106 a minute, but the radial pulse was 53, the *second* beat of each couple being the strongest (not the first, as formerly) and the only one reaching the wrist, though the first and feebler one was plainly visible in the carotids. While I was listening, the heart suddenly, without any transition, changed its rhythm, and fell back to an even beat of 90, and so continued. She was not herself conscious of any change in the rhythm of the heart, or aware that it had been beating unusually before.

"Jan. 13th, 1871.—I have not seen this patient since the last notes were taken, eight months ago. She is grown, and is now a tall girl fifteen years of age. A few weeks ago she noticed at night her heart beating in what she calls a 'tune,' a regular cadence, with perfect regularity, two beats and a stop, two beats and a stop, or else three and a stop, she does not remember which. As she lies in bed at night she can hear every beat of her heart quite loud, from the murmur; this peculiarity of rhythm therefore struck her, as she had never heard it before. After lasting a few nights it ceased, and she has noticed no more of it since. On examining the heart this morning, the rhythm I found was as follows: the beats were in couples, a strong beat followed by a weaker beat The different strength was principally marked by the different length and loudness of the murmur, that of the first being loud and sustained—a prolonged roar—and that of the second weaker and shorter. The interval between the pairs—the excess of the interval which separated them over that which joined them — was nothing like enough for an intermission. The first beat was well marked at the wrist, but of the second there was hardly a trace; in fact, to the finger, unassisted by the ear, the pulsations would have appeared to be half the number they were. While I was listening to the heart it suddenly settled down into an even beat, of the same rapidity as before, but with the beats perfectly equidistant and alike—each murmur a steady

grind, just like its fellow. On making the patient walk up and down my room for a turn or two, the couple-beating was for a time reinstated, but not for long. Pulse 92, respiration 19."

Let me point out to you the essential distinctness of such a rhythm as this from anything like intermission. You may of course have an intermission occurring regularly at every third beat, and then you necessarily have the pulsations going in couples—two beats and an interval, two beats and an interval,—the interval representing the lost third beat. This is a form of intermittent pulse that I have by no means rarely met with. But it has nothing in common with the rhythm now under consideration; it is, in fact, merely a form of intermittent pulse, peculiar from its regularity, and happening to occur every third beat. Here, however, we have something very different, and the two points of distinction are these:—In the first place, in the intermittent pulse the continuity of the rhythm is unbroken; after the lost beat the next pulsation falls exactly into the place at which it would have fallen had there been no intermission. If you go on counting regularly, disregarding the intermissions, you find the swing of the time is not thrown out. Whereas, in the couple-rhythm, the next pulsation after the pause occurs earlier than it would if it had been a true intermission; if you attempt to go on counting regularly you are at once thrown out. In the second place, the beats are not of equal force as they are in simple intermission, but one of them is manifestly stronger than the other—you have a strong beat, a weak beat, and an interval, and then again a strong beat, a weak beat, and an interval. It is these peculiarities that give to the rhythm its individuality—that show that each cycle is an individual, a unit apart by itself, and that its elements are portions of this unit. An ordinary rhythm, no matter what it is—intermittent, or irregular, or what not,—is a succession of pulsations; such a rhythm as this is a succession of cycles of pulsations.

Gentlemen, I must finish this lecture as I began, by a *quasi* apology for occupying the precious clinical hour by detaining your attention on what are at best but the eccentricities and curiosities of disease. And yet, one of these days, such phenomena may throw we cannot tell how much light on the physiology and pathology of the heart. I must hope at some future time to give you from our clinical stores something larger and more general on the entire subject of the heart's rhythm. In the meantime you will not be the worse for having your powers of observation sharpened by attention to such minutiæ.

## ON THE TREATMENT OF HYPERPYREXIA,

### AS ILLUSTRATED IN ACUTE RHEUMATISM,

### BY THE EXTERNAL APPLICATION OF COLD.

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(*Continued from page* 215.)

THE next case presented much greater difficulties in treatment, and a more obstinate persistence of the pyrexia, though the treatment of this latter symptom was commenced at an earlier period than in the last related. The patient had, however, more serious complications; a double pneumonia, with pleuritic effusion also double, and a large pericardial effusion, all existing before the dangerous rise of temperature took place; and, probably in consequence of the latter condition, the case was more protracted.

Allen C——, aged thirty-six, admitted into University College Hospital June 6th, 1871. Is a coachman; single; has lived well; not in the habit of drinking. Has had gonorrhœa, but never a chancre. No other previous illness. No hereditary predisposition. The present (his first) attack of rheumatic fever began apparently on May 26th, in consequence of exposure. He had then pains in the back and joints, perspired freely, and had rigors on several successive days; but was able to attend at St. Mary's Hospital as an out-patient during the whole week previous to his admission to University College Hospital, on the eleventh day of the disease.

The first notes of his case are on the 7th June, when friction was heard over the heart. On the following day (the thirteenth of the disease) he had pains in the elbows and hands of both sides, in the right shoulder, and in the left knee and ankle. He perspired freely. The tongue was furred. The heart's apex was in the fourth interspace, half an inch outside the nipple; and the cardiac dulness extended to the lower border of the second left cartilage. On this day the patient began to cough. This was attended with a thin mucoid expectoration, streaked with blood; and on examination there was found to be dulness at the right base extending as high as the angle of the scapula, with weak breath-sounds. On the following day (June 9th—fourteenth day of the disease, third day in hospital) the left base was also affected, and bronchial breathing with fine crepitation was heard at both bases. The patient was very prostrate, and perspired profusely. The joints first affected were better, but the right knee was now swollen and painful. The urine throughout this period had been free from albumen, sp. gr. 1021 to 1025, acid, and high-coloured.

The temperature from his admission until the 12th June (the seventeenth day of the disease) varied from 102° to 104·4° Fahr.; it only reached the latter point on the evening of the 8th, when the patient began to cough, and when it may be presumed that pneumonia was commencing. There was, however, no variation in the pulse-respiration ratio (90 : 27 — 100 : 26) previously observed, until the following morning, when they were respectively 104 and 40. The temperature did not, however, during the two succeeding days maintain the same high standard; on the following morning it was only 102·8°, and it did not again rise above 103·1° until the evening of the 12th June.

On the morning of June 12th (the seventeenth day of the disease and the sixth after his admission to the hospital) there was no material change in his general state. The morning temperature was 102°; pulse 104; respiration 36. At 8 P.M. of this day he became delirious. At 9 P.M. the temperature was 105·6°; at 9.5 it was 105·7°; and at 10 o'clock 105·8°. He was now given half a drachm of quinine in a single dose in powder. No further rise of temperature ensued for two hours and twenty minutes; but in the last hour (from 11.10 P.M. to 12.20 A.M.) it rose nine-tenths of a degree, or from 105·7° to 106·5°; and in another hour it rose another half degree, attaining 107° Fahr.—a rise of five degrees in fifteen hours. During the last four hours the patient had been more or less constantly delirious, though capable of being roused when spoken to, and once answering rationally—giving the address of his relatives; this, however, was done with difficulty. (He gave the address wrongly, and voluntarily corrected himself.) He appeared to have no pain. Though he had on previous days perspired freely, the skin was now dry. The face was flushed, and dusky in tint, though not so cyanotic as in the last case. The eyes were suffused and injected. The alæ nasi acted strongly. The pulse was jerking, irregular in rhythm, but not intermitting, 100 to 108. The respiration varied from 44 to 46. The tongue was dry and brown.

At 2 A.M. on the 13th, when the temperature was 107°, he was put into a bath at a temperature of 89° Fahr., which was gradually cooled during twenty-five minutes to 86°. He remained twenty-five minutes in the bath. During this period the temperature in the rectum fell from 107·3° (the height observed after he had been six minutes in the bath) to 103·1°, or a fall of 4·2 degrees. The pulse in the bath had fallen to 90. He passed a loose motion in the bath, but while in it he became perfectly conscious. The pulse became full and incompressible. The sense of dyspnœa diminished. At 2.33 A.M., ten minutes after his removal from the bath, the temperature in the rectum had fallen to 99·1°, a diminution of four degrees; the pulse was 84, the respiration 36. In fifteen minutes more the temperature had fallen to 98°, or another degree; the pulse was 80 and the respiration 20 in the minute; he was perfectly rational and conscious. Hot bottles were then applied to the feet and warmth to the back. During the last three hours three ounces of brandy had been given. Eighteen minutes later, in spite of the external warmth, the temperature in the mouth had fallen to 97·8°, a total reduction within an hour of 9·5 degrees. He then went to sleep for nearly an hour and a half, during which period the temperature rose two degrees, or to 99·7°, when the hot bag was removed. At this time the state of the heart was found to be the same as on the 8th and 9th,

or four days previously. The pulse was 100, full, regular, and strong; respiration 32. It did not appear advisable to give him the fatigue of examining the lungs posteriorly. There was no perspiration. During the two hours succeeding, the temperature gradually rose to 101·9° (2·2 degrees), and the ice-bag was then applied to the spine, but with very little effect on the temperature, which oscillated during nearly three hours, while the application was continued, between 101·2° and 102·2°—finally, however, falling to 100·9°, a reduction of one degree, when the ice-bag was removed. At 10 A.M. on the morning of the 13th, the seventh day after his admission, the eighteenth day of the disease, he had slept more or less continuously since 3 A.M.; the pulse was 82, jerking; respiration 36; tongue moist, with a thin white fur; patient was a little deaf from the quinine given the afternoon before. From 10 to 11.40 A.M. the temperature rose from 100·9° to 102·5°, or 1·6 degrees. The ice-bag was then reapplied, but there was no reduction of temperature for more than six hours, when at 6.15 P.M. it had fallen to 100·9°. During the whole of this period it oscillated from 102° to 102·8°. The pulse-respiration ratio maintained an average frequency of 84 : 32. The bowels acted naturally. The patient was conscious, comfortable, and composed, without pain, though very prostrate. (There is an omission here when the ice-bag was removed.) Within an hour of the last fall of temperature (or from 6.15 P.M. to 7.15 P.M.) it had again risen 1·3 degree (from 100·9° to 102·2°).

The ice-bag was now applied continuously to the spine for fourteen hours, from 7 P.M. to 9 A.M. on the 14th. The temperature during the whole of this period oscillated between 101·8° and 102·8°, but only remained below 102° during the last three hours of the application, and it never fell below 101·8°.

At 9 A.M. on June 14th, after thirty-two hours of this treatment (the nineteenth day of the disease and the eighth after admission), the heart's apex was undiscoverable, and the dulness had risen to the first rib. There was intense friction at the base, and a loud double murmur at the apex, the nature of which, whether exo- or endo-cardial, was doubtful. The heart's sounds were exceedingly irregular, more so than the pulse. The patient coughed much, with distinctly rusty sputa. Both bases were dull, but the level of dulness was not further elevated. There was weak breathing at both bases, with pleural friction. The tongue was covered with a creamy fur; the patient was very tremulous; the pulse was weak, varying from 100 to 84; respiration 36. Since the preceding evening the patient had taken thirty grains of quinine, in doses of ten grains at intervals of four hours, a considerable quantity of brandy (six drachms every half hour), and abundance of beef-tea and milk. He had passed a considerable quantity of pale urine, sp. gr. 1008, acid reaction, no albumen nor sugar; the urine had a peculiar odour, like that of diabetic urine. Ordered to discontinue the quinine *pro tem.*; to continue the brandy, six drachms every half-hour. During this day (the nineteenth of the disease) the temperature from 10 A.M to 4 P.M. varied from 101·5° to 102·8°; the pulse was from 80 to 82, and very dichrotous; the respiration from 30 to 44. At 4 P.M. the ice-bag was reapplied, when the temperature was 102·6°, and was retained for three hours and three-quarters (until 7.45), when the temperature had gradually fallen to 100·1°, or 1·5 degree. At 8.30 P.M. of the same day I found that the cardiac dulness extended to the clavicle. The apex could not be felt. The sounds were excessively irregular and confused. Loud friction could be heard, and strong friction fremitus was felt over the whole cardiac region. The pulse was intensely dichrotous. The patient was excessively prostrate and tremulous. The tongue was more furred; but his manner was calm, natural, and composed. There was a slight return of pain in the joints, but no perspiration had taken place since the 12th—i. e., during the past forty-eight hours. A blister two inches square was ordered to be applied over the heart. From 8.30 to 11 P.M. the temperature remained below 102°. After this time it rose during four hours and a half, or until 3.30 A.M. of the 15th, to 103·6°. The ice-bag was now reapplied to the spine for five hours and a half—i. e., until 9 A.M. No appreciable effect was produced by it on the temperature during the first three hours, but this fell during the remainder of the period of application to 102·7°, or nine-tenths of a degree, and the ice-bag was then removed. The temperature rose again within an hour and a half to 103·4°, and remained above 103° nearly the whole of this day—falling, however, on two occasions (at 4 and 9 P.M.) to 102·9°.

There is an omission in the memoranda here as to whether the ice-bag was applied during this period, but I find it noted at 4 A.M. on the following morning that the ice-bag was re-applied, and I believe that it was continuously employed. During this day (June 15th, the twentieth day of disease and the third of treatment) the patient's prostration was extreme; but at one time a little perspiration appeared. The bowels acted naturally, with a semi-formed motion. Brandy was given in doses varying from three drachms to half an ounce every half-hour. The pulse varied from 100 to 90, and was excessively dichrotous; the respiration from 36 to 32.

During the night of June 15th—i. e., after seventy-two hours of this treatment—the temperature remained stationary at 103·4° during three hours; and though during the whole of this period, and subsequently for an hour and three-quarters, an ice-bag was continuously applied to the spine, it rose half a degree in the succeeding hour; and in the next forty-five minutes it rose rapidly 1·5 degree, reaching 105·4° at 4.49 A.M. on the 16th. The patient was placed in a bath of 96° Fahr. at 4.47 A.M., so that a rise of two-tenths of a degree followed his immersion. He was kept in the bath three-quarters of an hour, the temperature of the bath being gradually artificially lowered from 96° to 78°. During this time a gradual reduction of the patient's temperature ensued of 2·8 degrees, or from 105·4° to 102·6°. It fell seven-tenths of a degree more within five minutes after his removal, and continued sinking for another twenty-five minutes, when it had reached 98·7°; or within an hour and ten minutes the temperature had been reduced by 6·7 degrees. It then gradually rose, during the succeeding two hours, to 102·4° (3·7 degrees), when the ice-bag was re-applied; but in spite of this application, which apparently produced no effect, it rose 1·8 degree in two hours more, reaching at 10 A.M. 104·2°. Soon after his removal from the previous bath, the temperature of which was 99·5°, some perspiration was observed on the face.

He had taken in the last twenty-four hours twenty-eight ounces of brandy, three pints of beef-tea, four pints of milk, seven eggs, and three bottles of lemonade. The tongue was much cleaner. The pulse had, however, increased in rapidity from 84 to 120, and it was jerking and dichrotic; respiration 38 to 44. He was ordered to resume the quinine in doses of two grains every hour.

On June 16th (fourth day of treatment, tenth day after admission, and the twenty-first day of the disease), at 10 A.M., when the temperature had risen as before stated to 104·2°, he was again placed in a bath at 95°, and retained there forty-five minutes, while the temperature of the bath was gradually lowered to 86° Fahr. While in the bath the temperature in the rectum fell 2 degrees; and it fell 1·8 degree more in the succeeding half hour—viz., to 100·4° (mouth), when it slowly began to rise. A total reduction of 3·8 degrees was thus effected in less than an hour and a half, three-quarters of an hour only having been passed in the bath.

Seeing that the temperature threatened again to rise, and being desirous that this should be checked at once, and having on the last occasion found that the ice-bag to the spine had failed in doing this, I had the patient packed in the wet sheet wrung out of ordinary cold water (probable temperature about 60°); temperature of ward 72°. He was kept in this two hours; but in spite of it, the temperature had risen to 102·4°, or 1·6 degree, though a reduction of four-tenths of a degree was observed during the first half hour.

He had in the last eight hours taken ten grains of quinine. The tongue was more furred; the pulse was 120, dichrotous, and very irregular. In an hour and a half more after his removal from the pack, the temperature had further risen 2·1 degrees—viz., to 104·5°.

The patient was now placed in a bath of 101°, and kept there during three hours, or from 3.20 to 6.30 P.M. In the first twenty minutes of this time the bath was gradually cooled to 86°—i. e. until the patient's temperature began to fall; it was then gradually warmed during the ensuing hour and a half to 98°. The temperature of the bath was 100° for a few minutes; but it was again cooled to 97°, when the patient was removed.

The effect of this bath on the patient was as follows:—During the first fifteen minutes of his immersion the temperature in the rectum rose eight-tenths of a degree—reaching 105·3°. It then gradually fell during two hours to 100·2°, a reduction of 5·3 degrees, while the bath was being warmed to 98°; and then rose during the succeeding hour to 102·3°, when the patient was taken out because he complained of a feeling of exhaustion and shortness of breath, and of pain in the right side. The pulse during this period varied from 100 to 120; it was bounding and very dichrotous. The respiration was 42 to 44. After he had been an hour in the bath while the temperature of the water was 92°, and the patient's temperature in the rectum was 100·8°, he had a slight shivering fit, which was not repeated. He took brandy and food as usual while in the bath, and had an ounce of brandy given him on his removal to bed.

At this time (June 16th, the fourth day of treatment) some œdema of the hands was first noticed. (This increased much subsequently.) The patient now had some quiet sleep; but in an hour and twenty-five minutes the temperature had risen half a degree (from 102·3° to 102·8°), and the ice-bag was reapplied for two hours, during which the temperature rose to 104° and then again fell to 103·7°. A great increase in the cardiac dulness was noticed at this time. It filled the whole left front from apex to base. The patient's extreme weakness prevented any examination of the back. The respiration was suppressed in the dull area. At the acromial angle and upper axilla alone could any breathing be heard; here it was weak blowing.

Two hours later the patient was again put into a bath for fifty minutes: temperature of bath on immersion, 100°, gradually cooled to 77°. This reduced the temperature in the rectum 2·5 degrees (from 104·6° to 102°); and it was followed by a further fall during fifty-five minutes of 4 degrees, the temperature (mouth) now reaching 98°. A rigor then took place, and external warmth was applied. The temperature rose gradually, during three hours and a half, to 102·6°, when he was again put into a bath at a temperature of 81°. Five minutes after immersion the temperature in the rectum was 103·8° (i.e., it had apparently risen 1·2 degree, but the previous one was taken in the axilla). Thirty minutes in this bath reduced the temperature in the rectum one degree—namely, to 101·6°; that of the bath rose two degrees. The temperature then fell in fifty minutes to 98·2° (axilla), but it rose gradually during the ensuing two hours to 102° (or 3·8 degrees). Some moisture of perspiration was now observed on the face. He was now packed in the wet sheet: this had the effect, within forty minutes, of reducing the temperature 1·1 degree, but it rose in the ensuing hour 1·3 degree (to 102·4°), when the pack was renewed, with the effect of reducing the temperature in forty-five minutes by one degree.

June 17th (the twenty-second day of the disease, the fifth day of this treatment, and the eleventh day in hospital).—9.15 A.M.: The dulness had diminished in the left side. The acromial angle and upper axilla were resonant. The dulness was pyramidal, and had diminished in transverse diameter since the day before; for whereas then the whole infraclavicular region was dull, the loss of resonance now extended only to the cartilages of the first and second ribs, and only slightly beyond the cartilage of the third rib on the left side. The respiration was natural at the acromial angle and upper axilla on the left side, but ceased almost absolutely at the fifth rib in the axilla, with a little distant tubular breathing below this. On the right side, dulness existed at the fifth rib, mammary region, sixth rib, in axilla. The respiration right front was good to the level of dulness; below this suppressed. No râles audible. The patient had taken in the last twenty-four hours twenty-four ounces of brandy, two pints of beef-tea, and four pints of milk. He had also taken a grain of quinine every hour. He was very tremulous; manner agitated; dozed occasionally, but felt easier, and had less sense of dyspnœa; pulse 104, very dichrotous; respiration 36. At 10 A.M., temperature 102°; at 11.35, 102·2°. He was then put into a bath at a temperature of 91°, and retained there thirty-five minutes, while the temperature of the bath was reduced to 75°. During the first seventeen minutes after immersion the temperature in the rectum varied from 103·2° to 103·4° (the previous temperature was taken in the mouth). It then fell to 101·4° in the rectum (or 3·2 degrees), and continued to fall for an hour to 98·6° (in the mouth), when the patient had a shivering fit. In thirty minutes more it had risen to 100·1° in the mouth. The pulse was 96; the respiration 24. The patient was very weak, and was given an ounce of brandy every half-hour. He was now put into a pack, changed every half-hour, for four hours and a half. The temperature during this time oscillated between 100·6° and 101·6° in the mouth. During three hours of this time he took six ounces of brandy. The temperature in the next hour reached 102°, and the pack was renewed every twenty minutes. The patient's exhaustion was extreme. Tracheal râle appeared, but he was conscious when spoken to. Brandy was continued—an ounce every half-hour.

For the succeeding twelve hours and a quarter—from 7.40 P.M. on the 17th, to 8 A.M. on the 18th (the sixth day)—he was kept constantly in the wet pack, or in towels wrung out of iced water, and changed frequently. During this period the maximum temperature was 102·3°, the lowest 100·2° (all taken in the mouth). The pack was then discontinued for three hours, and no rise of temperature ensued.

June 18th (sixth day of treatment).—Has taken in the last twenty-four hours thirty-three ounces of brandy, four pints of milk, a pint and a half of beef-tea, a grain of quinine every hour, and three doses of three minims each of tincture of opium. Tongue cleaning; bowels have acted naturally; cardiac dulness as yesterday; dulness of right front diminished, now reaches the sixth rib; respiration decidedly freer. Patient stronger; can turn himself in bed. Pulse less dichrotic to feel; still intensely so by sphygmograph—108. Respiration 44. The pack was resumed at 12 at noon, the temperature having risen to 101·6°, and continued till 8.30 P.M.; sometimes wrung out of ordinary water, sometimes wrung out of iced water. The temperature of the patient oscillated (in the mouth) between 100·5° and 102·5°; the latter only once. At 8.30 P.M. the temperature was 100·8°. The patient had had two natural motions during the day. The pulse was still 110; the respiration 28. The chest, now examined, showed that both sides of the back had become resonant to within a hand's breadth of the base. There was some friction at the level of dulness, and weak breathing without râle was heard here. Above the dulness the respiration was natural. Heart as before. Breathing laboured; but no sense of dyspnœa. Tongue rather dry; patient quite conscious; felt comfortable. During the whole of the ensuing night the patient remained without the cold applications, and the temperature never rose above 101·8°, and during the latter four hours remained below 101°, the minimum being 100·4° (in the mouth). He continued to take two grains of quinine every hour.

On the following day, June 19th (seventh day of treatment, twenty-fourth of the disease, and thirteenth day in hospital), the cardiac dulness had fallen to the level of the first rib midsternum. There was a little subsultus tendinum, the pulse was still dichrotous, and œdema of the hands persisted. He was calm, and quite collected. He had taken in the last twenty-four hours 32 oz. of brandy, and nourishment as before. He had slept well during the past night, and had perspired freely on the face and body. At 11 A.M. he sweated profusely; temperature 101·9°. The perspiration then ceased, and the temperature rose, till at 12.50 P.M. it was again 102·8°. He was then put into the iced pack, and kept in it for three hours, with a reduction of temperature to 100·8°. The pack was then discontinued, but the temperature rose within three hours to 102·9°, when he was put into a bath at 97°, and retained there for thirty minutes, while the bath was cooled to 86°. During the first twenty minutes of the bath the temperature rose to 103·5°, or ·6 of a degree. It then fell to 102·2°, but the patient shivered, and felt great oppression of the chest and shortness of breath, and he was consequently taken out. The temperature fell for seven minutes after removal from the bath, but rose again immediately, and in three hours and a half had reached 103·3°. On examination of the chest both bases posteriorly were now found to be perfectly resonant. The respiration was freer, but there was abundant friction at both bases. The hands were much swollen. The breathing was very laboured, and he complained of pain behind the sternum, and much cough. Pulse 112; respiration 28. The pack was now resumed, and continued during nine hours, being changed every half hour. Under its influence

the temperature steadily fell, without any marked oscillations, from 103·3° to 100·7°, or 2·6 degrees; when the pack was left off for an hour, during which the temperature rose 1·5 degree, to 102·2°, and the pack was resumed for half an hour. At 10 A.M. the temperature had again fallen to 100·8°.

At 10 A.M. on the 20th (eighth day of treatment, fourteenth day since admission, twenty-fifth day of disease) there was considerable œdema of the hands and feet, and some puffiness of the eyelids. The pulse was 106; respiration 24. The pulse was dichrotous. The breathing was deep, quiet, and regular. He had had two loose motions in the last four hours. There had not been throughout any albumen in the urine (retained for quantitative analysis). Patient had taken twenty-four ounces of brandy in the last twelve hours. The quinine was now omitted temporarily, and the cold applications were never resumed.

The subsequent progress of the patient was as follows. He still remained in a state of excessive prostration, and for three days more took from twenty-four to twenty-nine ounces of brandy in the twenty-four hours; this was then on successive days reduced to nineteen and eighteen ounces. He continued to take the latter quantity daily until the 11th July, when it was reduced to sixteen ounces, and on the 25th July to ten ounces.

The temperature on the 20th of June, when the pack was omitted, oscillated between 101·6° and 103·1°, but only once reached this standard; the majority of the temperatures varied from 102° to 102·8°. In the following night it varied between 101·2° and 102°, being generally at or below 101·7.

On the 21st, the ninth day of treatment, he began to perspire profusely, and complained of pain in the right knee, and felt very ill and weak; œdema persisted in the face and hands. The temperature varied from 101·9° to 103·6°; it was commonly above 102°. The cough was troublesome, with purulent bronchitic sputa. The chest was clear, except at the extreme bases, where there was some dulness, and where friction was heard, together with moist râles. The pulse maintained a pretty uniform frequency of 112; respiration 32. He was ordered one grain of quinine every hour.

June 22nd.—During the ensuing twenty-four hours, until the tenth day of treatment and the twenty-seventh of the disease, the temperature varied from 102·3° to 103·7°. He perspired freely. Both knees and the right hand became painful, and the patient complained much of weakness and discomfort. The sputa on this day became clear and frothy; œdema persisted in the hands and feet and slightly in the eyelids. He continued to improve during the following day, the temperature only once reaching 103°, and falling gradually till on the morning of the 24th it had reached 100·7°.

24th (twelfth day of treatment, twenty-ninth day of of disease).—Patient felt much better. He had continued to perspire freely, but he had no pain in the limbs. The cardiac dulness had fallen to the upper border of the third cartilage. There was intense friction over the whole cardiac region. The œdema of the eyelids and hands had diminished, but some still persisted in the feet. He had taken the quinine regularly. The tongue was nearly clean, and he ate a boiled sole for dinner. The pulse was 108, and still intensely dichrotous.

The pyrexia now gradually diminished; but the temperature only fell to normal, 98·4°, on the morning of the 8th July, the twenty-sixth day after the extreme pyrexia and the forty-third of the disease; and evening, and sometimes morning, exacerbations, varying from 99° to 102°, occurred occasionally until July 26th, or the sixty-first day of the disease. The patient, however, got up and walked about on the 19th July.

The cardiac condition gradually improved. The apex first became perceptible in the fourth interspace outside the nipple, then fell to the fifth interspace outside the nipple, and on the 28th July, when the patient was ordered to Eastbourne, it remained in the fifth interspace vertically below the nipple. Friction had, however, disappeared on the 13th July, and no cardiac murmur remains. The upper border of the heart's dulness did not return to its natural level (the fourth rib) till July 13th.

The lungs became quite resonant everywhere, but some friction remained at the right base as late as July 5th. The œdema of the hands and feet had disappeared on June 26th, the thirty-first day of the disease. Slight rheumatic pains continued and recurred in the joints as late as the 10th of July.

He took a grain of quinine every four hours up to the 10th of July; afterwards it was taken every six hours. He began to take cod-liver oil about the 1st July.

On July 16th, the first day he was able to stand, his weight was 8 st. 1½ lb. On July 24th, though there had been occasional slight pyrexia in the interval, he weighed 8 st. 6 lb., being a gain of 4½ lb.

*(To be continued.)*

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## ON THE JARGONIUM FALLACY.

BY H. C. SORBY, F.R.S.

SINCE the fact of my having been led to give an erroneous explanation of the cause of the remarkable spectra produced by compounds of zirconia with the oxides of uranium has been brought forward as an argument against the employment of the spectrum-microscope in certain departments of qualitative analysis, it may perhaps be well to explain the particulars of the case, lest it should lead to any further misunderstanding.

In the first case I found that a particular zircon from Ceylon gave a spectrum with the most remarkable and unique absorption-bands. As soon as I saw this, I concluded that it must be due either to uranium or to some unknown element. I had only a small quantity of material at command, but I did what I could to test for uranium by the best then known blowpipe methods combined with the spectrum of a bead made nearly half an inch long. This would have enabled me to detect a very small quantity of uranium. That very little was present in zircons was shown by the fact that no *chemical* analyses that had been published even alluded to it.

I was well aware that there is often a remarkable difference between the spectrum of a crystalline substance and of one in solution in water or in melted borax, and I was therefore very anxious to make out whether, when uranium is combined in a crystalline form with silica, the spectrum was different. I found, however, that in the case of other silicates, uranium gave a spectrum of the normal character, with the absorption-bands in the blue, and none at the red end, and this made it appear very unlikely that, when combined with silica in the jargons, it could give a spectrum with no bands in the blue, and a most extraordinary number in the red—i. e., as different as could be. I afterwards found that, when certain opaque blowpipe beads were examined by concentrated sunlight, those from the jargon which gave the remarkable spectrum also gave a spectrum quite unlike that due to any other substance, including of course uranium. There thus appeared evidence that no *known single element* would give the spectrum in question, and therefore, in that state of our knowledge, it appeared a reasonable inference that it was due to a new element. The case stood thus: the occurrence of such a new substance was apparently far more probable than that the spectrum could be due to any entirely unknown modification of a known substance. I then published my paper on Jargonium.*

Now if I had left matters thus, it is very probable that jargonium might never have been looked upon as mythical; but in working out more fully the application of the spectrum-microscope to blowpipe chemistry, and in studying the spectra of opaque beads made with carbonate of soda, I found that this method enabled me to detect a far less quantity of uranium than had ever been possible, for I could easily recognise so small a quantity as $\frac{1}{15000}$ grain. On having thus discovered such a delicate test, I applied it to the jargon, and found that I could thus detect uranium; and, having established its presence, it again became a question whether the remarkable bands might not be due to it after all. I therefore took a portion of a zircon, which by itself did not give the supposed spectrum of jargonium when made into an opaque bead with borax, and added to it a little oxide of uranium. To my astonishment, I then found that it gave the supposed jargonium spectrum. It was no wonder that I had not been able at first to detect

* Proceedings of the Royal Society, xvii., 1869, p. 511; or Chemical News, xx., 1869, p. 7.

the uranium, for the spectrum was too dark when so much as $\frac{1}{1000}$ grain was used. The best result was with about $\frac{1}{2000}$ grain, and I could recognise $\frac{1}{5000}$ grain. On working more fully into the question, I found that this remarkable spectrum was not due to uranium as such, but to a combination of oxide of uranium with zirconia—i. e., jargonia = zirconia + oxide of uranium. When oxide of uranium is similarly combined with other earths no such abnormal spectrum is obtained; also when zirconia is combined with other oxides no such striking anomaly is met with. It is a special and exceptional peculiarity of zirconia when crystallised with oxide of uranium.*

And now for the moral to be drawn from these facts, as connected with our present question.

1st. The discovery of the real state of the case was due to the *spectrum-microscope* most pre-eminently. Chemistry itself had failed, and had even tended to countenance the existence of a new element. The truth might never have been known if it had not been that the spectrum method enabled me to detect easily so small a quantity as $\frac{1}{5000}$ gr. The error had been due to not having sufficiently applied the spectrum method. Now that all is known it is easy to say what ought to have been done. I can see that I ought to have followed out more fully the spectrum of jargon with microcosmic salt, for I had thus obtained results which ought to have led to the truth; but the experiments were difficult with the amount of material then at command, and were, as I thought, not satisfactory, because the absorption-bands were scarcely visible.

2nd. The error was occasioned by the anomalous spectrum of the *crystalline compound* of zirconia with oxide of uranium. If spectra of solutions had been examined, no such error would have been possible. Transparent blowpipe bead of zirconia and oxide of uranium give the well-known spectra of uranium. It is only when the compound of zirconia and the oxide of uranium crystallises out that the anomaly occurs. In the case of the detection of such colouring matters as that of blood no such error is possible, for all is in solution.

The facts simply prove that *I* was at first misled by a most remarkable exception to a general rule. They show that an original inquirer in an unexplored field may make errors; and who ever imagined that anyone ever did much work without some sort of error? But I do not think it could be reasonably argued from this that the spectrum method cannot be relied on in the detection of blood. It would be about as reasonable an objection as to argue, because ordinary chemical methods have led others to suppose the existence of new elements which were afterwards proved to be mixtures, that therefore chemistry cannot be relied on in the detection of poisons.

Buxton, July 6th, 1871.

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## PERFORATIONS OF THE MEMBRANA TYMPANI.

BY W. B. DALBY, F.R.C.S., M.B. CANTAB.

(Continued from page 252, vol. ii. 1870.)

FROM what has been said before, it will be seen that the diagnosis of occlusion of the Eustachian tube, when the tympanic membrane is perforated, is quite easy. If the patient cannot blow through the perforation, and if, in addition to this, air cannot be passed through either by Politzer's method or by the Eustachian catheter, there can be no doubt that the tube is impervious; any mere obstruction would be overcome by these means. This complete occlusion is only met with when the disease of the middle ear has been of very long standing, and it is not due, as in obstruction, to a swelling of the mucous membrane, but is a stricture, the seat of which is the submucous areolar tissue.

The extreme deafness which is present in a similar condition of the Eustachian tube, when the tympanic membrane is entire, is not always met with in a proportionate degree when the membrane is perforated. But it must not on this account be regarded as a trifling complication; for, in the first place, it entirely precludes the possibility of treating the whole mucous membrane lining the middle ear by passing fluids from the meatus through the Eustachian tube, and for this reason it becomes almost next to hopeless to ever get entirely rid of the discharge; there is therefore not so much chance of better hearing as the result of a more healthy condition of this surface. In the next place, as far as I have observed, it is rarely that, with this condition, much benefit is derived from wearing an artificial membrane.

This does not always hold good however; for in February, 1870, I saw a gentleman, aged thirty-two, in whom a perforation on the left side was the result of scarlet fever in 1848. From that time he had never been free from a discharge. The membrane was almost completely destroyed; but by wearing an artificial membrane, in the form of a plug of cotton-wool, he had been able to hear conversation remarkably well for many years past. Without this aid he could with difficulty hear a raised voice close to the ear. The Eustachian tube was on this side impervious. He was totally deaf on the other side.

I should be inclined, then, to think it quite possible that, although the occlusion of the Eustachian tube renders the otorrhœa difficult to treat with success, the extreme deafness met with in these cases may be due altogether to causes situated in the tympanum (I am here speaking of cases where the labyrinth is not affected), and not be owing to the closed tube at all; for in addition to the act that, in conjunction with this occlusion, the tympanic disease has been always most severe and long-continued, it is not easy to see how the imperviousness of the Eustachian tube can affect the hearing when the membrane is perforated. For it would seem that, in such cases, the part it plays in the conducting apparatus of keeping the balance of air equal on both sides of the membrane, was no longer required. These considerations should have some weight in determining the propriety of an attempt to render the Eustachian tube pervious by dilatation with laminaria bougies. This process is tedious and somewhat painful. In the event of succeeding, relapses are frequent, leaving all the work to be done over again. More experience as to the results of this treatment, where the membrane is perforated, is much wanted; but, as far as I am able to judge, they are not encouraging. (This does not affect the question of dilatation of the Eustachian tube when the membrane is entire.) In the case, however, of a patient with total deafness on one side, and considerable deafness on the side with a perforation of the tympanic membrane and an impervious Eustachian tube, where the tuning fork could be heard on that side well through the cranial bones, and where there was no aid from an artificial membrane, if the patient, with a distinct understanding of the probable results, should elect to undergo the treatment as a *dernier ressort*, it should be considered. And then it should be done more with the idea of improving the condition generally of the middle ear, and with it the hearing, than in the hope of any mechanical benefit arising from a pervious Eustachian tube.

A young gentleman, aged twenty-three, had good hearing on the left side. The disease of the right ear dated from his seventh year of age, since which time he had been deaf on this side, and had had a discharge from the ear. There was very little of the membrane left, and what there was had fallen in, and was adherent to the promontory; the lining membrane of the tympanum was red and tumid; the Eustachian tube was quite impervious. He could hear a loud-ticking watch at one inch from the ear, but for practical purposes the ear was useless. No sort of artificial membrane improved the hearing. The patient, who understood his condition, and the surgeon who sent him to me, were in hopes that the Eustachian tube might be rendered pervious. I advised, however, that the treatment should be confined to an endeavour to reduce the discharge as much as possible. With this view he was to wear in the daytime a piece of cotton-wool, soaked in strong liquor plumbi, pressed up against the tympanum, and he was to have a syringe which he could himself use night and morning. In this way the discharge will often so far subside as to give very little trouble; but, when the Eustachian tube is quite closed, it scarcely ever ceases altogether. This is an excellent way of treating granulations, which are not unfrequently seen on the membrane when it is perforated, and on the wall

* See my paper in Proceedings of the Royal Society, xviii., 1870, p. 197; and Chemical News, xxi., 1870, p. 73.

of the tympanic cavity when the membrane is nearly gone.

In the left ear of a surgeon whom I saw in January, 1870, there was a small perforation at the upper part of the membrane, and the rest of its surface was a mass of exuberant granulations. He had been very deaf on that side as long as he could remember, had occasionally a good deal of discharge, and was never entirely free from it; at that time it was profuse; the Eustachian tube on that side was impervious. He did not get any better hearing, but the discharge had so far subsided after using the liquor plumbi in this way for three weeks as to give him very little trouble, and the granulations had disappeared. To improve the condition of the tympanum, and thus to diminish the discharge, is as important as to increase the hearing power; for it should never be forgotten that as long as this is done the disease will not advance to caries of the temporal bone, and that consequently the danger of the brain and lateral sinus becoming involved is avoided. This part of the subject, so far as it relates to the fatal effects occurring in cases of neglected otorrhœa, is not at present under notice; but one result of perforations—viz., caries of the mastoid process, producing a chronic discharge behind the ear, lasting for an indefinite period—calls for a few words to illustrate that the same plan of treatment as applied to the tympanum holds good for the mastoid cells. A patient with a perforation of the membrane may have a discharge from an opening over the mastoid process for years, the purulent matter having passed from the tympanum through the mastoid cells, and either made for itself an external opening behind the ear, or having been let out by an incision in this situation. If the syringe, with the nozzle guarded by india-rubber, and filling the meatus (as described at p. 580, vol. i. 1870), be used, the fluid will be sent through the tympanum and mastoid cells, and in passing out at the external wound (which it does sometimes in a full stream) will wash away completely all secretion. Let this be done every day, and anyone who has not before seen this treatment adopted will be truly surprised at the rapidity with which the wound behind the ear will heal. This plan of clearing the tympanum and mastoid cells at the same time of all purulent secretion is, I venture to say, a most rational one. It is based on the same principle as that advocated (in vol. i. 1870, p. 580) for treating the tympanum and Eustachian tube, and is followed by the same satisfactory results.

Accompanying perforations, the mastoid cells will be found to be more frequently involved when, from any reason, such as an impervious Eustachian tube, or a polypus growing from the wall of the tympanum, the discharge is kept more than usually pent up in that cavity. Two cases will be sufficient for illustration.

A girl, M. M. W——, aged twenty, whom I saw in Nov., 1870, had had an opening over the right mastoid process, with a constant discharge, for five years. The tympanic membrane was almost gone; there was a small polypus growing from the roof of the tympanum. The perforation was not the result of any of the exanthemata, but, as far as one could judge from the girl's account, came on during an attack of acute catarrh of the tympanum. She could hear a loud-ticking watch in contact with the ear. The polypus was removed, and caustics were applied regularly to the root for five weeks, at the end of which period the polypus was entirely destroyed. During this time the tympanum and mastoid cells were cleansed in the way directed; and, as the Eustachian tube was pervious, the solution passed freely out through the inferior meatus of the nose and the external wound at the same time. After this treatment had been pursued for three weeks, the wound behind the ear was healed. She could hear a watch at eight inches from the ear, and conversation, very well. The hearing did not improve beyond this, though she was under treatment in all for seven weeks.

July 20th, 1870.—J. G——, aged nineteen, had had a discharge from the left ear since infancy. The membrane was very largely perforated, and the deafness on that side was complete. Six months previously he had suffered from a good deal of pain over the mastoid process. In ten days an opening had formed, and there had been a discharge ever since from the wound. He was treated in the same way as the previous case, and by August 17th the wound was healed.

It seems hardly necessary to observe, while on this subject, that whenever a patient with a perforation is suffering from pain with extreme tenderness and swelling over the mastoid process, nothing is gained by waiting for the presence of pus to be assured by fluctuation. The sooner an incision is made down to the bone the better: this may be carious, when it will sometimes break down on pressure with the point of the knife or probe; whether it is so or not, at any rate, by this procedure, followed by a stream of water passed through the tympanum and external wound, the pus will be washed out of the mastoid cells, and, having a free outlet, the danger of the affection advancing to within the cranium will be lessened.

The subject of polypi—inasmuch as, although they are usually present as an effect of perforations, they may still exist independently of them,—and the modes in which caries of the temporal bone leads to fatal results, merit a separate and detailed account. Thus far, however, my remarks on the treatment of perforations of the membrana tympani arising from tympanic disease conclude with this paper—that is, so far as they relate to the defective hearing and discharge from the middle ear, whether appearing at the external meatus, or also from a wound communicating with the mastoid cells.

*(To be continued.)*

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CASE OF

## REMARKABLE PRESENTATION OF THE FŒTUS IN UTERO.

BY ROBERT ANDERSON, M.D., L.R.C.S. EDIN.

THE following case came under my observation on the 25th of May, and presents many remarkable features, it being an instance in which, so far as I am aware, the greatest number of parts of the child presented at one and the same time. I therefore venture to think it may be of interest to the profession.

At 10 P.M. on the 25th of May I was summoned hurriedly to see Mrs. A——, who was in labour with her ninth child. She was being attended by a midwife, who, on finding something abnormal, sent at once for my assistance. She is a woman of very short stature, but with a roomy pelvis. She has had two still-born children previously at the full time, and also two footling presentations, both of which are alive. On my arrival I found she had been in labour since 8 A.M.; but with very light pains. The liquor amnii escaped about 4 P.M., and the pains had almost entirely ceased since then. On attempting to examine per vaginam, I discovered about nine inches of the cord outside the vulva, which I ascertained had existed for two or three hours. It was pulseless. When the finger was introduced into the vagina, I found both feet presenting towards the posterior wall of the vagina; and, on sweeping round to feel the extent of dilatation of the os, I found a hand towards the right wall, and one towards the left. There was also a large, soft, bulging mass in the centre, which, on first thought, I took for the breech; but, on pressing it, I found it to be some part of the head, with a large caput succedaneum. On finding the os fully dilated, I first endeavoured to reduce the prolapsed cord; but failing, I seized both feet, and, bringing them down, delivery was easy. The child, of course, was dead; and all attempts at resuscitation were unavailing. The face of the child was delivered under the pubes, but proved no obstruction. An examination of the fœtus showed a caput succedaneum on the forehead, which was thus proved to have been the part of the head presenting, along with the cord, feet, and hands. The mother has progressed rapidly to recovery, and is now almost quite well.

The above case is to me singular as an instance of no fewer than six parts of the fœtus presenting in the vagina at once—viz., the umbilical cord, both feet, both hands, and the forehead. The face coming under the pubic arch was to be looked for when the position of the child in utero is considered. It however proving no hindrance to delivery, a very complicated presentation turned out a case of easy management.

Airdrie, June, 1871.

# DISEASE OF THE SUPERIOR MAXILLA,

## CAUSED BY THE GROWTH OF A CANINE-TOOTH WITHIN THE ANTRUM; OPERATION.

BY R. W. M'COY, F.R.C.S.,
COLONIAL SURGEON, SIERRA LEONE, WEST AFRICA.

A NEGRO BOY, a native of Sierra Leone, aged fourteen years, presented himself among the extern patients at the Colonial Hospital, Freetown, in the month of March, 1871, with a tumour of the left upper jaw growing from the antrum.

The tumour formed a globular projection on the left side of the face, about the size of an apricot, producing a good deal of facial disfigurement. The nose and mouth were distorted to the right side, the left ala nasi was flattened out, and the alveolar margin and corresponding front teeth of the left upper jaw were visibly prominent, with a bulging of the palate plate in the roof of the mouth. It was quite painless; no tenderness to the touch; firm and slightly elastic on pressure; circumscribed and clearly limited to the boundary walls of the antrum; and the integument was freely movable over its surface.

A correct history of their diseases is always difficult to get from the natives here; but, as far as I could ascertain, this was of about two and a half years' duration from the time it first attracted attention—growing slowly and painlessly, and not in any way affecting the boy's general health, which in other respects was good.

I punctured the tumour under the lip with a trocar and canula about the centre, where the wall seemed thin and elastic, and drew off half a drachm of thin glairy fluid, plugging the opening afterwards with a narrow strip of lint. The puncture, however, closed up in a few days, and the tumour continued to increase in size.

I proceeded to remove it on the 11th of June. The boy having been put under chloroform, I made a single straight incision through the upper lip to the left of the mesial line into the nostril; and, having divided the mucous membrane along the gum, was enabled, by the expansion of the nostril and the pliancy of the integument, to dissect the soft parts from the tumour, and expose its entire surface. I then notched it in front with a small knife-saw, and used the bone forceps to complete the excision of the front wall of the tumour. The plate of bone removed was 2¼ in. by 1¼ in., very thin, and lined on its concave surface with a thick gelatinous substance—mucous membrane morbidly thickened and degenerated. The cavity of the antrum was found nearly filled up by this morbid substance. In the centre was a space about the size of an almond, containing a little viscid mucus, and projecting into it from above was a tooth. The tooth was firmly embedded in a socket, apparently growing from the nasal process or inner angle of the orbital process of the superior maxilla, and it required some force to extract it with the tooth forceps. It was a fully developed, sound, canine tooth. Having removed a quantity of the gelatinous contents of the tumour, the wound in the lip was closed by two silk sutures and a hair-lip needle in the centre. There was very little bleeding throughout, and the wound healed by the first intention.

The boy is now perfectly well, and his expression of face as good-looking as Nature ever designed it to be. The left upper canine tooth is wanting in its natural place.

July 6th, 1871.

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DONATIONS, BEQUESTS, &c.—"C. D. W." has given another £1000 to the Hospital for Sick Children, Great Ormond-street. Miss Elizabeth Kingston, of Harpenden, Herts, bequeathed £500 Three per cent. Consols each to the Asylum for Idiots, Redhill; the British Home for Incurables, Clapham-rise; and the Infirmary, Hemel Hempstead. Mr. Humphrey Nichols has given £100 to the Clinical Hospital, Park-place, Cheetham-hill; and the Ardwick and Ancoats Dispensary, Manchester. Mr. Benj. Chandler bequeathed £100 to the General Hospital, Birmingham. Mr. John Thomas Murphy, bequeathed £200 to the City of Dublin Hospital. Lady Staples has given £50 towards the funds of the Idiot Institution at Lucan.

# A Mirror
## OF THE PRACTICE OF
# MEDICINE AND SURGERY
## IN THE
# HOSPITALS OF LONDON.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## LONDON HOSPITAL.

### TWO CASES OF PNEUMOTHORAX TREATED BY ASPIRATION.

(Under the care of Dr. RAMSKILL.)

THE subjoined notes have been furnished us by Mr. Stephen Mackenzie, resident medical officer.

The following two cases are of interest as showing the great value of the pneumatic aspirator in the treatment of pneumothorax. In the first case the patient was immediately rescued by the operation from a condition of great suffering and danger, and placed in ease and safety from which there was no relapse. In the second, from the nature of the disease causing the pneumothorax, cure was impossible; but the distressing dyspnœa was removed, and the passage from life made easy.

There appears to be no drawback to the operation, which in itself is exceedingly trivial and painless. Its good effects are immediate. There was recently in the hospital, under Dr. Ramskill's care, a case of hydro-pneumothorax of some standing. This was treated by puncture with an ordinary trocar and canula, and a drainage-tube was left in. Unfortunately, the operation was followed by extravasation of air into the cellular tissue around the wound and, ultimately, into the whole subcutaneous cellular tissue, causing the death of the patient. In the first of the following cases there was at the time of the operation slight extravasation of air into the cellular tissue around the wound, which is attributed to an accident in the operation. Owing to the puncture being so small, the orifice closed in the course of an hour or two, and no further escape took place. What little air there was in the cellular tissue was absorbed in the course of the next day. In the second case there was no surgical emphysema whatever. The only precautions necessary in the operation are: first, to pass the needle in horizontally in the centre of the intercostal space so as to avoid the ribs, for the cases in which surgical emphysema has followed have been those in which the needle has glanced off the rib into the cellular tissue; and, secondly, only to pass the needle sufficiently far to reach the air in the pleural cavity, for if the needle project far into the pleural cavity, when the lung expands the visceral layer of the pleura comes in contact with it, and considerable pain is caused. The first case, from its interest, is detailed at some length.

*Pneumothorax, probably from Rupture of an Emphysematous Air-vesicle; aspiration; recovery.*—Henry W——, aged fifty, had been subject for many years to cough and shortness of breath, both of which had become worse year by year. On the morning of admission he felt as well as usual, except for a slight pain in the right side of his chest. In the middle of the day he went out of doors on business, and whilst walking in the street felt all at once that he could not get a breath, had great pain in the chest, and staggered so that he had to be supported. This took place just outside the hospital, and he was immediately carried in. The messenger who fetched Mr. Mackenzie said that the man was so ill that it was doubtful whether he would be alive when he reached him. He was found livid and gasping for breath, but as the dyspnœa was said to be slightly less than it had been a few minutes previously, some hot brandy-and-water was given him, and he was ordered to remain in the receiving-room for half an hour, and then be carried into a ward. When seen later in the day, he was suffering from extreme dyspnœa and sat with his arms and shoulders raised, but was not so livid as when first seen. The nurse said his breathing had been even worse than it

then was, and she had thought that he was going to die. When his shirt was taken off it was found that the breathing was exceedingly laboured, and that there was great recession of the intercostal spaces and epigastrium at each inspiration. On percussing the right front of chest, the resonance was found to be tympanitic from the second rib to the lower margin posteriorly; it was tympanitic from the root of the lung downwards. The respiration was amphoric over the tympanitic portion, and accompanied by metallic tinkling. The liver was pushed down entirely below the ribs. The left lung was highly emphysematous, and respiration was accompanied by sibilant and sonorous râles. The heart was beating with great rapidity.

It was concluded from the history and physical signs, that the pneumothorax was in all probability the result of the rupture of an emphysematous air-vesicle, and it was at once decided to remove the air from the pleural cavity by the pneumatic aspirator. The smallest needle of the instrument was employed, and this was introduced at the ninth intercostal space, close to the angles of the ribs. At the first attempt the needle glanced off one of the ribs, and appeared beneath the skin. At the second attempt it entered the pleural cavity, and air rushed into the body of the syringe. The air was pumped out until no more would come, and it was then found that between sixty and seventy ounces, by measure, had been evacuated. On listening now to the chest it was found that there was no longer any amphoric breathing, and by percussing it was found that the liver had ascended slightly into the thorax. A little air was perceived in the cellular tissue, around the seat of puncture, but this excited no alarm, and no compress or other application was placed over the spot. The patient experienced the greatest relief from the moment that one or two syringefuls of air were drawn off, and, at the end of the operation, was able to take a full breath, and to lie down with ease. There was no pain or other discomfort. Half a grain of morphia was administered, and the patient was directed to lie on his right side, and resist all inclination to cough.

On the following morning it was found that he had slept all through the night; he was in no pain, and his breathing was quite comfortable. There was less air in the cellular tissue of the back than on the previous evening, and there was no elevation of temperature. The air in the cellular tissue of the back had disappeared by the evening. For the next week he was kept lying as far as possible on his right side, and took a third of a grain of morphia three times a day, to prevent coughing. There was no reaccumulation of air whatever in the pleural cavity. At the end of a week he got up. He was troubled with some bronchitis, and emphysema of both lungs, which were habitual to him, and which were much relieved by appropriate treatment. He left the hospital for the country three weeks from the time of his admission, feeling better than he had been for months.

*Pneumo-thorax in a phthisical patient; aspiration; great relief.*—Ellen S——, aged twenty-eight, was admitted with very acute broncho-pneumonic phthisis. On the evening of admission her pulse was 150, respiration 44, temperature 105°. Her breathing was very difficult from the first, but after she had been in the hospital about ten days, it was found that she could only rest with her body bent double, her chest resting on a pillow placed in front of her. She could lie in no other position. This attracted attention, and on examination it was discovered that there was a large quantity of air in the left pleural cavity. The smallest needle of the aspirator was introduced between two of the lower ribs posteriorly, and 74 oz. (by measure) of air were drawn off. The relief was instantaneous, and she was at once able to lie in the recumbent position. She died a week later. There was slight reaccumulation of air in the pleural cavity a day or so before her death, but it was not sufficient to cause any great distress.

## WEST LONDON HOSPITAL.

### STONE IN THE BLADDER; LITHOTRITY; CURE.

(Under the care of Mr. TEEVAN.)

ON May 17th, H. C——, a candle-maker, aged sixty-five, pale and thin, came under Mr. Teevan's care at this hospital, complaining of symptoms of stone in the bladder. Three years ago patient noticed that he began to pass red gravel, attended with much pain in the loins, and that occasionally small pieces of "grit" came away. Has suffered from several attacks of retention, but they were only of short duration. For the last year he has passed blood once a month. Urine usually clear. A year ago he suffered much pain when riding in a railway-carriage; has not ridden in any vehicle since. Was obliged to leave off work three months ago. Patient's brother was operated on for stone at St. George's Hospital. At the present time patient can scarcely walk on account of the pain occasioned by any change of position. His nights are broken, and he has lost flesh and strength greatly of late. Urine remains clear so long as he is quiet, although the last few drops are often tinged with pure blood.

On the same day Mr. Teevan introduced a sound with a very short beak, the patient's pelvis being well raised on a stiff bolster, and found a stone lying behind an enlarged prostate. He was put on henbane and potash, and as he wished to be treated as an out-patient, he was desired to attend on May 25th for operation. Accordingly, on that day, at 3 P.M., Mr. Teevan performed lithotrity, the stone being of uric acid, and rather larger than a walnut. Patient came and went in a cab.

May 31st.—Patient has passed only a few small pieces of stone since operation. Mr. Teevan to-day crushed three large fragments.

June 8th.—A large piece of stone came away this morning. Four fragments were crushed to-day.

21st.—Patient improving in health; has passed a great deal of débris since last operation. Pain nearly gone when urinating. Can take a long walk with comfort. Two small fragments were found and crushed to-day.

July 15th.—Patient says he is well and quite free from pain. Rode in an omnibus yesterday from Turnham-green to Whitechapel and back in perfect comfort. Last débris passed a fortnight ago.

Aug. 1st.—Has resumed work; completely well.

Mr. Teevan remarked that a number of crushings, each of very short duration, were preferable to a fewer number in which the operations were more prolonged, for the shorter the period the lithotrite remained in the bladder the less chance there would be of any irritation being set up. He objected to chloroform in lithotrity, as it prevented the bladder indicating its degree of sensibility to the presence of the lithotrite. The present case had been treated with perfect success as an out-patient, and many cases of stone could be similarly cured.

## PROVINCIAL HOSPITAL REPORTS.

## QUEEN'S HOSPITAL, BIRMINGHAM.

### CASES UNDER THE CARE OF MR. CLAY.

*(Communicated by* Mr. HOPKINS.)

*Prolapse of the Uterus; Elytrorrhaphy; cure.*—The patient, aged forty-three, a laundress, was admitted with prolapse of the uterus and menorrhagia. On examination, the uterus was found to protrude two and a half inches beyond the vulva; it was of the normal size, extensively ulcerated, and gave rise to a thick, yellowish, offensive discharge. She had worn several pessaries, without deriving any benefit. Her sufferings were very great, and arose chiefly from severe pains in the lumbar and inguinal regions. As she was incapacitated from following her employment and urgently wished for some permanent relief, Mr. Clay decided to perform elytrorrhaphy as soon as the parts should be in a fit state. The uterus was replaced, the recumbent posture enjoined, and lint soaked in glycerine applied daily to the ulcerations. When, in three weeks, these had healed, it was determined to perform the operation. A trowel-shaped portion of mucous membrane was removed from the anterior wall of the vagina, and the denuded parts were united by means of silver wire sutures. There was no hæmorrhage. Opium was administered to relieve pain and constipate the bowels. All went on very well until the third day, when uterine epistaxis and extensive vaginitis supervened. The vagina was occasionally injected with a solution of hyposulphite of soda. The lowermost suture, however, ulcerated through, and it was feared that the whole of the united

surfaces would give way. These fears were not realised, for when the stitches were removed, a fortnight after the operation, the whole denuded tract was found to be firmly united and the uterus held in excellent position. An india-rubber air pessary, moderately inflated, was worn a few days after getting up, and in five weeks from the operation the patient left the hospital, freed from the discomfort she had previously experienced. She was requested to wear the pessary for a month or two, in order to support the uterus while she underwent unusual bodily exertion. Five months after the operation she presented herself at the hospital for examination. The use of the pessary had been discontinued. The uterus was retained high up in the vagina. The menstrual discharge was not by any means excessive. She had gained flesh, said she felt quite well, and expressed her gratitude for the relief she had obtained.

*Delivery of a deformed Fœtus; accidental post-partum hæmorrhage.*—This was the patient's ninth pregnancy. Her previous labours, with the exception of the last two, had been quick and regular. In the last three pregnancies she had, during the latter months, suffered from occasional large losses of blood. When the labour in question commenced, Mr. Newman, to whom the case had been entrusted, found the patient suffering from severe hæmorrhage, and much exhausted in consequence. The os uteri was dilated to the size of a crown-piece, and a soft irregular mass, which was believed to be the placenta, presented. On assistance arriving it was however discovered that the liquor amnii had been discharged, and that the child's intestines were in the vagina, while some unusual and irregular projections could be felt within the uterus. As the woman was in a very critical condition, and delivery was urgent, Mr. Clay was sent for. He diagnosed that the presentation was pelvic, and that the child was maimed, and probably deformed. Ergot having been administered, he proceeded to deliver the woman. The stump from which the foot had been removed, was drawn down, and traction made with it, but owing to the absence of the foot, and the slippery state of the limb, the leg repeatedly slipped from the hand and it was found impossible to move the child by its aid. The use of the fillet, for various reasons, was inadmissible, and Mr. Clay, having the craniotomy forceps at hand, applied them, and by means of traction on the leg the pelvis of the child was born. The delivery of the other parts of the child was then easily accomplished. The placenta was generally adherent, and was removed by the introduction of the hand, and peeling it off the uterus. An alarming hæmorrhage now supervened, but was quickly controlled by grasping the uterus, and by the application of cold. Restoratives were freely administered, and the patient rallied well, and made a good recovery. The following woodcut, from a drawing made by Mr. Ricketts, one of the students of the hospital, gives a representation of the irregularities which the child presented.

A, Rudimentary leg. B, Amputated leg. C, Intestines. D, Portion of intestine. E, Liver.

In commenting on this case, Mr. Clay observed that it presented the following malformations: — Eventration (ectopia) from extensive arrested development of the anterior parietes of the abdomen; intra-uterine amputation of the foot of the left lower extremity; and a rudimentary limb arising from the upper portion of that limb (permelus and micromelus). It was of great practical interest as showing that no rules can be laid down for the management of such cases, and that the practitioner must depend upon his knowledge of obstetrics and the means at command for the detection and treatment of any complication which may present itself. The pelvic presentation was easily diagnosed by first finding the spine, then passing the finger down this structure to the anus and up the projecting part, which it was not difficult to conclude was a leg, although the absence of the foot was at first somewhat puzzling. The craniotomy forceps had been an excellent auxiliary in the delivery.

## LIVERPOOL NORTHERN HOSPITAL.

### A CASE OF CANCER OF THE LUNG.

(Under the care of Dr. WATERS.)

J. A——, a labourer, was admitted into the hospital on Jan. 31st, 1871. He said that up to ten weeks before admission he had been quite well, and was working regularly. He was then seized with pain in the right side of the chest and dyspnœa, attended with cough and expectoration of white frothy sputa. In about a fortnight his face began to swell, and soon afterwards the neck and arms became swollen, the left arm being the first to increase.

The patient presented a very curious appearance. The face and neck, the upper extremities, and the chest-walls were very œdematous, the abdomen and lower extremities being perfectly free from œdema. The whole of the venous system of the head and neck, thoracic walls, and arms, was evidently in a state of extreme congestion. There was a bluish discoloration of the veins of the skin of the arms, and a tortuous condition of the superficial veins of the walls of the chest both in front and behind. At the base of the neck, on the right side, some hardened masses, evidently glands, were found; but none existed on the left side. The left side of the chest was resonant on percussion; the expansion was good; and the breath-sounds were normal, except that they were somewhat exaggerated. The right side of the chest was everywhere dull; bronchial respiration was heard at the upper part of the lung in front, but lower down scarcely any breath-sounds were audible. The heart-sounds were very audible on this side, and a faint impulse was perceptible through the stethoscope, but none could be felt with the hand. The respiration behind was tubular about the middle of the lung. The heart-sounds were faint, but free from murmur. The pulse was 124, and weak.

The patient complained of pain in the right side of the chest and of dyspnœa. This latter was increased by the slightest movement. He could not lie on either side, and was obliged to be supported in a bed-chair; the tongue was red; there was some expectoration of a frothy and watery character.

There was but little difficulty in the diagnosis of this case. The supposition that the disease was aneurism was rendered very doubtful by the absence of pulsation; and that there was some malignant affection involving the mediastinal glands and the right lung was rendered highly probable by the existence of the hardened masses in the neck. These presented to the touch all the characters of scirrhus.

No relief could be afforded to the patient. Chloral was given for a few nights, but, although he slept more, his nights were more distressed than previously; it was therefore discontinued. He took his food pretty well, with a small quantity of stimulants, also a mixture of iron and calumba. Thirteen days after admission he spat a little blood; the œdema of the upper extremities increased, and on the sixteenth day there was some œdema of the scrotum, but the legs never swelled. He died on the seventeenth day.

An examination of the body was made nineteen hours after death. The left lung was healthy and contained no deposit. The right lung was the seat of large masses of scirrhous deposit; it was solid throughout, and universally adherent to the chest walls. The scirrhous substance had softened in some places so as to give rise to cavities filled with pus. The mediastinal glands were greatly enlarged, and scirrhous throughout.

THE

# THIRTY-NINTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

*Held at Plymouth, August 8th, 9th, 10th, and 11th, 1871.*

THE Address in Surgery, by Professor Lister, on Thursday morning, attracted a large audience, who, on assembling, found the large room already in possession of the State Medicine section, which had met at ten o'clock to receive a report on Sanitary Reform. This Dr. Stewart persisted in reading, notwithstanding the impatience of his audience, until at last, amid cries for "Lister" and general uproar, he desisted, with a promise to "repeat the dose" in the afternoon. Mr. Lister's address and demonstrations occupied two hours, during which the strictest attention was given by his audience, and he was frequently applauded. In the afternoon the sections were in session with more or less success; and in the evening the Dinner of the Association was held in St. George's Hall. This was certainly not the success which had been anticipated; for the dinner was badly served, and, in consequence of this, and also of the fact that the President could not make his voice heard in proposing the toasts, the lower end of the room became noisy, and the conduct of some of the profession was not such as to impress outsiders with the courteous breeding of medical men. The Bishop of Exeter made an excellent speech in returning thanks for his health being drunk; and Sir Charles Stavely was particularly happy in his allusion to the army being at present in the hands of the doctors. The remainder of the speeches, by the usual speakers on these occasions, were of average ability.

On Friday morning the bulk of the members of the Association spent two hours very pleasantly on board H.M.'s ship *Cambridge*, when Captain Foley kindly put his crew through gun-drill and small arm and cutlass exercise for the benefit of the visitors; and also exploded some torpedoes in order to demonstrate the effects of these novel engines of warfare. Immediately afterwards parties were made up for St. Germains, the Yealm, and Eddystone; and consequently the sections were deserted, and the concluding general meeting was attended only by the officials.

The report of the Council of the British Medical Association which we printed last week was the draft report, and not the actually amended text of the report as passed by the Council and subsequently presented to the general meeting of the Association. There were generally only a few unimportant and chiefly verbal differences between the two, and there would have been no need to refer to the matter but that we have been requested to call attention to one particular alteration which refers to the general business management of the Association; and as some importance seems to be attached to the exact wording of the particular clause, we give it at length with pleasure. It seems that in order to prevent the possibility of any misinterpretation of a passage which might be misunderstood as implying blame to former and present editors in relation to the business of the office, the following sentences were substituted for those which appear at the top of the second column of our report at p. 237 last week:—"Your Council must here, however, state that neither the late nor the present editor of the *Journal* is responsible for the unsatisfactory management of the business of the office. They thoroughly appreciate the efforts which Mr. Hart has made since his reappointment as editor to bring about a better management, and the important assistance which he has rendered in ascertaining the defects which prevail, and the changes required for their removal; but they felt that they could not ask him to continue the supervision of the *Journal* office, which is no part of the duty of an editor."

The following are abstracts of papers read, in addition to those which we published last week:—

Dr. JULIUS ALTHAUS read a paper "On Paralysis of the Bladder, and its Treatment by the Constant Galvanic Current." In this paper the author, after referring to some important researches on the physiology of micturition lately made by Professor Budge, of Greifswald, enters fully into the pathology of paralysis of the bladder. He eliminates from this affection all cases of mere atony of the viscus from over-distension owing to organic obstructions, such as stricture of the urethra and hypertrophied prostate, and other causes; and likewise all cases of incontinence of the urine which is generally ascribed to paralysis of the sphincter vesicæ. Real paralysis of the bladder is, according to Dr. Althaus, only observed (*a*) when the conduction of nervous influence from the pedunculus cerebri to the bladder is interrupted; (*b*) when the lower part of the lumbar portion of the spinal cord is diseased; and (*c*) when the normal excitability of the motor or sentient nerves of the bladder is pathologically altered without any central affection being present; most cases of this latter class being of the kind termed reflex or inhibitory paralysis. After reviewing the treatment generally adopted for this condition, the author expresses his opinion that, both in efficacy and quickness of action, the constant galvanic current properly applied is superior to all other remedies which are used for this affection. He then describes the best mode of applying the current in such cases, and winds up by relating three cases illustrative of the different varieties of the complaint. One of these was owing to syphilitic disease of the pedunculus cerebri; another occurred in a hysterical patient; and the third arose from disease of the lumbar cord. In all these cases the paralysed bladder recovered rapidly under the influence of the constant galvanic current.

Mr. FURNEAUX JORDAN read a paper "On the Extension of Inflammation from the Epididymis to the Urethra." The author remarked that inflammation of the prostatic urethra from any cause (injuries, operations, foreign bodies, urinary obstructions, or adjacent inflammations), may extend to the epididymis. It would be an original discovery to find any variety of prostatic inflammation which might not run by continuity along the submucous connective tissue of the vas deferens. He was not aware that anyone had observed the converse of this. He had recently watched a case in which inflammation unmistakably travelled from the epididymis to the urethra. A married man, free from disease and the history of disease, suffered from the effects of a severe blow on the scrotum. On the subsidence of scrotal swelling, the left epididymis was found to be enlarged, painful, and tender. The next day the adjacent portion of the vas deferens was tender, and swollen to the size of a goose's quill to near the inguinal ring. The following day the swelling of the cord extended into the ring. A few days later a slight urethral discharge appeared, and all the symptoms of a mild urethritis. Mr. Jordan believed any new fact to be of value which would help to explain urethral discharges.

Dr. VICTOR JAGIELSKI read a paper "On Cow's Milk Koumiss." He said that koumiss is a pure animal milk in a state of fermentation. In its composition it combines all the requirements for a wholesome nutrition of the human body; while certain products of the fermentation add to it important therapeutic properties. All animal milks are convertible into koumiss, and the general qualitative composition of the products is the same for all. In all, the act of fermentation sets free the casein, albumen, and butter in a highly attenuated form, and develops alcohol and carbonic and lactic acids, together, according to Morfit, with certain fragrant volatile compounds. Once started, it continues until all the lactose of the milk has been transformed, and this transmutation is more rapid in proportion to the rise in the temperature of the air. Dr. Jagielski distinguishes the three gradations thus formed, according to their respective physiological effects; but though each may have a specific application, the general properties are retained by all. No. 1. This is the freshly made koumiss, with the minimum of the products of fermentation. In three to five days it becomes—No. 2, which is more acidulous than sweet, and so sparkling that it requires to be drawn from the bottle through a tap. In ten to fifteen days it has changed into—No. 3, when the fermentation is more developed than in No. 2, and extends to the maximum with time. Consequently the taste is acid, and the koumiss rushes through the tap as a rich, creamy, foaming liquor. After quoting many distinguished European and American authorities in its favour, the author noted some of the favourable results of his own professional experience with the use of koumiss in cases of constipation, impaired digestion, debility, chronic bronchitis, consumption, diarrhœa, in the adynamic stage of febrile diseases, after confinements, operations, in diabetes, &c. In conclusion he

urged a thorough trial of it in both hospital and private practice, believing that, though it is not a specific for any disease, it merits the most serious consideration as a most benign medicinal agent.

DR. PROTHEROE SMITH read a paper on "A Successful Method of Treating certain Cases of Dysmenorrhœa and Sterility." After giving the pathology of obstructive dysmenorrhœa, with the usual mode of treatment, Dr. Protheroe Smith called attention to that of dilatation by bougies, suggested by Dr. Mackintosh, and the modification of it by Sir James Simpson, and his operation of incision of the cervix by the hysterotome. Dr. Protheroe Smith's experience having suggested a doubt of the advantage of this practice, he was led to adopt the plan he now advocates in certain cases indicated by conditions which he mentioned. To overcome the stricture of the os internum he uses extension force by means of his uterine dilator, described and exhibited, which is peculiarly suitable to this purpose. And, to restore the os tincæ to its natural form, per speculum, he incises it laterally at the commissures of the labia. Particular instructions were given for this treatment, which during the last twenty-five years he has employed with considerable success in remedying both obstructive dysmenorrhœa and sterility. Six cases were cited in illustration.

DR. WM. ROBERTS (of Manchester) read a paper "On Intemperance as a cause of Chronic Bright's Disease." The author said that the generally received opinion that the abuse of alcoholic liquors is a frequent cause of Bright's disease has been called in question by Dr. Dickinson, in an elaborate argument in his recent work on Albuminuria; and the scope of the paper was to examine the evidence on which Dr. Dickinson had relied in coming to an opposite conclusion. The writer endeavoured to show that the pathological facts adduced by Dr. Dickinson were either untrustworthy or that they had been incorrectly interpreted. Dr. Roberts especially pointed out the fallacy of the argument drawn from the reports of the Registrar-General. It was quite true, as Dr. Dickinson had stated, that the districts which yielded the largest returns of deaths from intemperance did not return an excessive proportion of deaths from Bright's disease; but exactly the same result was obtained when the same statistics were applied to the mortality from cirrhosis of the liver—a disease which is notoriously and chiefly the product of intemperance.

DR. SWAYNE read a paper "On the Treatment of Hæmorrhage arising from the Retention of the Secundines after Abortion." Treating chiefly of abortions in the third, fourth, and fifth months, he pointed out their dangers from special liability to retention of the secundines, and consequent hæmorrhage and septicæmia. Obstetric authorities were divided as to treatment, some favouring an expectant plan, with the use of plugging, ergot, styptics, and disinfectants to obviate hæmorrhage and septicæmia, and others advocating manual interference. He remarked that the plug might sometimes cause an accumulation of blood in the uterine cavity, and showed a pad for preventing this, by making pressure on the fundus uteri. He pointed out the risks of intra-uterine injections, when a large amount of fluid is thrown up with too much force. After remarking that the weight of obstetric evidence in the present day is in favour of manual interference, he stated his concurrence in this view; but that he preferred, instead of using the hand for removing the placenta, to employ an ovum forceps, so modified as to act both as a dilator and an extractor.

DR. THOS. UNDERHILL read a paper "On the Treatment of certain Cases of Placenta Prævia, and of Post-partum Hæmorrhage." The author was opposed to the maxim so strictly enforced by most authorities, that in cases of "unavoidable" hæmorrhage delivery should not be attempted whilst the patient is in a state of syncope. During that condition the hæmorrhage ceases, the patient is in a state of anæsthesia, and the soft parts are relaxed—these being three desiderata for the safe and speedy performance of podalic version. By waiting until the circulation is re-established, and consciousness restored, there will be most probably a recurrence of the hæmorrhage, and the patient will have the dread of a formidable operation. Cases were given in support of the practice suggested. In the second part of his paper, Dr. Underhill advocated the view that in cases of post-partum hæmorrhage, should syncope supervene, it was more prudent to remain passive for a time than to resort to hasty measures to restore consciousness. He based his argument upon the fact that, during syncope, the circulation being either languid or altogether suspended, coagula would be more likely to form and occlude the patulous orifices of the vessels than when subjected to the artificial impetus.

MR. LUND (of Manchester) read a paper "On Antisepticity in Surgery." It was argued by the author that antisepticity might be brought about by any means through which the excreta of wounds were protected from putrefactive change, and the surfaces on which they rest preserved from contact with the irritating chemical products thus elaborated. In recent wounds the strict observance of antisepticity saves much constitutional distress, tends to keep the tissues from loss of substance by sloughing and ulceration, and the patient's strength by needless suppuration. But in healing-wounds it was admitted that greater time will be often required to complete a perfect cicatrix, although this, when formed, will be more pliable and natural than under other modes of treatment. The claims of many antiseptics were considered, but preference was given to carbolic acid in very weak solution, or in that form of composition which Professor Lister has described as his carbolised muslin, a modification of the antiseptic cere-cloth first proposed by Mr. Lund at the meeting of the Association at Leeds in 1869.

MR. THOMAS LITTLETON read a paper "On the Effects of Submarine Descent on Man, and the Limits to his Capability." The paper consisted of extracts from the communication alluded to in the *Association Medical Journal* (Feb. 9th, 1855, p. 127), with a confirmation of the pathological views therein maintained. And, in addition, some allusions to the history of diving operations in the port of Plymouth. Also an induction from the experiments at the Royal Albert Bridge, &c., and a comparative consideration of the anatomy of the whale, as to the probability of man's capability, from a physical point of view, to compete with the whale in diving, as he has successfully with the eagle in balloon ascent.

DR. MERRYFIELD discussed "The Meteorology and Climate of Plymouth," under the following heads:—1. Distinction between weather and climate. 2. Mean temperature, how found. 3. Hottest and coldest months of the year, time of day of maximum heat, &c. 4. Humidity, as obtained from the hygrometer; uses of wet and dry bulb readings in producing an artificial climate for invalids. 5. Effects of Gulf Stream on S.W. coast. 6. Ranges of temperature. 7. Atmospheric pressure. 8. Prevailing winds. 9. Rainfall; extremes and droughts. 10. Ozone; storms, electrical and atmospheric. 11. Conclusions.

MR. W. J. SQUARE read a paper "On Loose Cartilages in the Knee-joint, and their removal by Subcutaneous Incision." The first part of the paper contains remarks on the dangers of valvular and direct incision for the removal of loose cartilages from the knee-joint, and a reference to a few cases illustrative of these dangers; next a record of twenty-four consecutive and unselected cases of removal of loose cartilages by subcutaneous incision, without anxiety, let or hindrance; an appeal to the profession to adopt the operation; and lastly, a few remarks on the varieties of loose cartilage, their structure, and origin, illustrated by a series of preparations.

MR. W. J. SQUARE also read a paper "On the Influence of Nerves in the Repair of Fractures." The paper is founded on a case of simultaneous fracture of the spine, ulna, and femur. The patient survived three weeks. As the fractures were placed under precisely similar circumstances, the difference between the two (femur and ulna) was presumed to be due to the abstraction or otherwise of the influence of nervous centres.

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OUTBREAK OF FEVER IN A COTTON FACTORY.—The *Glasgow Star* reports that considerable excitement has been caused by an outbreak of fever among the girls employed at Airdrie Cotton Mill. Last week, about a dozen girls employed in the manufacture of winceys from foreign-grown wool, were seized with the fever. One of them died within three days of the attack, and this week other six have been laid up from the same cause. It is believed that the wool imported from abroad contains fever germs, as all who have been attacked were employed in that part of the factory where the wool is kept and manufactured.

# THE LANCET.

LONDON: SATURDAY, AUGUST 19, 1871.

IN the Medical Societies of London a complaint is occasionally made that the vigilance of officials has been relaxed, and that communications of a very inferior order have been by some accident permitted to be read. We hear on all sides complaints of the same kind with regard to a larger Society, and one that covers a far wider field of action—the British Association for the Advancement of Science. In each of its sections this Association has done and is doing useful work; but in each of them it is exposed to assaults from two classes of people, against neither of which it has any adequate defence. They are, in the first place, the mere crotchet-mongers, who have some invention or discovery of which none but themselves can appreciate the value; and, in the next place, the men of the world, who seek to bring pseudo-science to the aid of advertising, and to sell their wares more readily because the Association has set upon their brass the stamp of currency. Persons of this sort break out in the most unexpected quarters, and it is probable that no amount of vigilance could keep them altogether in abeyance. But still it would be worth while to frame some organisation that would be capable of the attempt, and that might at least serve to place impediments in the way of known and hardened offenders. At present the Association can scarcely be said to have any existence until the annual meeting commences; and then the sectional committees, hastily put together, and composed of men bent upon some business or pleasure of their own, can hardly be expected to give, and as a matter of fact do not give, the time and attention that would be necessary in order to read papers with deliberateness and to sift them with care. The ordinary process is—that the name of an author is read; that some member of the committee exclaims, "Oh, I have heard of him"; and that his production is thereupon passed for the public benefit. In this way, of course, there will be a large amount of good papers read, and also an amount (not very small) of matter which we can only characterise as rubbish.

Now we would put it to the Association whether the time of its members would not be greatly economised, and the value of its meetings greatly enhanced, if it were possible to arrange for the existence of a standing committee, however small, by which the papers intended for a section should be subjected to a *bonâ fide* examination by persons moderately conversant with the questions they might discuss. The plan does not seem to us to present any insurmountable difficulties, although its acceptance would of course imply some small amount of trouble to the secretaries, and such a change in the laws of the Association as only a general meeting could sanction. We do not despair, however, of seeing this change carried into effect, so that some limit may be placed on the powers of tormenting of the insects who now buzz round the meetings, and who, even if they are stingless, at least cause annoyance by the ceaseless monotone of their hum.

If we may raise our eyes from sectional work to what our transatlantic brethren would call a higher platform, we would further venture to suggest that the President might advantageously be aided by a Council of Revision in the preparation of his annual Address. This composition fluctuates through various degrees of excellence in successive years; but it is always open to the objection that its author must deal with a variety of subjects, upon some of which his views may require correction by the more exact knowledge of others. It can hardly again happen that a President will astonish his hearers by such a flight of fancy as Sir WILLIAM THOMSON'S hypothesis about the origin of life on our globe; but this latest achievement has at least the merit of calling attention to the possibilities of the case. With Dr. CARPENTER we are sure to be safe; but if a specialist *in excelsis* be set up in 1873, to discourse *de omnibus rebus* at Bradford, who can foretell what he may say, or how little Wisdom may be justified of her children. The President of the Association is regarded by many as the *ex officio* representative of British science for the year, and even his least enlightened utterances as dicta from which there can be no appeal.

We feel it right to notice also a quicksand which lies ahead of the modern progress of science, and of which all societies should especially beware. It depends upon the intrusion into her ranks of uneducated men—who have never been taught to weigh evidence or to balance probabilities, but who have climbed to sudden eminence by reason of aptitude for some particular line of observation or research. The course of events has a tendency to make such men as these abound; and the weakness of the day is to fancy them philosophers. We glorify these useful workers too much; and the natural result is that they effervesce, and extend their criticisms beyond the narrow limits of their proper province, so as at last to embrace all things, human and divine. The time is come for declaring, with no bated breath, that the progress of physical science has created no royal road to the education of the judgment; and that the scientific smatterer differs from other smatterers chiefly in being still more conceited than they. Even our intellectual giants—TYNDALL when he passes from Dust to Disease, and THOMSON when he discourses on the Origin of Life—show vulnerable heels to the shafts of criticism. Shall we then listen patiently while those who are not giants, and who, *quoad* vulnerability, are all heel, vex the ears of men by their presumptuous conclusions and their shallow reasoning.

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THE profession has no need to be ashamed of its work in so far as regards the elucidation of the laws which regulate the communication and distribution of cholera. The public may be assured that, if local sanitary authorities will seriously and energetically use the powers possessed by them, and act up to the light already given by medical science, cholera, should it unfortunately reach our shores, will be likely to be more curtailed in its diffusion than on any previous occasion.

The therapeutics of cholera are not in so creditable a

state as the epidemiology of it. We have got rid of some erroneous notions. We know better the limits of the power of remedies, and have learned the very doubtful advantage of some medicines that were thought to have specific virtues. Further, we have recognised more fully the natural history of cholera. Above all, we know the importance of adapting our treatment to the particular stage of the disease. But, having said this much, we can say little more; and yet it is of great moment, for the sake of the reputation of the profession and the satisfaction of the public, that we should be able to advance further, and lay down, with some show of unanimity, certain rules of treatment.

The chief difference of opinion in the profession has reference to the treatment of the diarrhœal stage of the disease. Everybody is agreed that, when collapse has set in, the recovery of the patient is likely to be furthered, not by active medicinal treatment, but by gentle and unirritating means for restoring the lost fluid of the tissues and of the blood, and by giving saline and other drinks, never forgetting the inestimable preciousness of cold water, with or without the addition of a few grains of soda or carbonate of ammonia, as suggested by Dr. JOHN MURRAY, of the Indian medical service, in his very sensible paper read recently before the British Medical Association. We may further note Dr. MURRAY'S praise, in regard to the treatment of this stage of the disease, in protracted cases, of the use of LIEBIG'S extract of meat, and of hot saline enemata given after each motion. The use of astringents in this stage of cholera would be absurd, and the use of opium more than absurd. Very much the same words would characterise the use of alcohol. The stage of collapse, and the equally or more fatal stage of reaction, are most complicated, and can only be treated safely by a practitioner who carefully considers the peculiarities of each case, and the exact way in which death seems particularly to threaten. There is one remedy which has had a great reputation in this stage of the disease concerning which we hear less and less, even from those who used to vaunt its power—we mean calomel. We used to hear it said that if only the liver could be got to act, if only a bilious stool could be procured, the patient would do well. This was almost tantamount to saying that if only the patient lived he would live; for, if life is to go on, it must be in the way of the restoration of all the ordinary processes of life, including especially the secretion of urine and bile, and all real remedies act by furthering these secretions. But the special power of calomel is now no longer vaunted. Whether Dr. HUGHES BENNETT'S doubtful experiments have made medical men more sceptical of the power of calomel over the secretion of the liver, or whether they have simply come to perceive that in cholera cold water is likely to be a more effective cholagogue than calomel, it might be difficult to say. Be this as it may, calomel is not in much reputation, and even Indian practitioners have given it up. We may reasonably hope, then, that there will be no wasted experiments on the use of this remedy.

As we said before, the only question concerning which there is much difference now in the profession is that of the treatment of the first stage of the disease. The irrepressible castor-oil controversy is threatening to assert itself again. To say nothing of the physician who is chiefly associated with the eliminative theory of treatment, a distinguished medical Baronet, not given to commit errors either of judgment or of taste, does not hesitate, every now and again, by somewhat unusual courses, to indicate his adoption of the castor-oil plan of treatment, or allow it to be indicated. On one occasion, if we mistake not, Sir THOMAS WATSON intimated that, in the event of an attack of the disease happening to himself, he would try the eliminative treatment. If this treatment is to have further trial on the strength of the authority of Sir THOMAS WATSON, we can only hope that Sir THOMAS'S authority will continue to be entirely dissociated from any personal experience of the treatment, as it is now admittedly unsupported by any personal observation of cases. Sir THOMAS WATSON'S mere authority will undoubtedly cause this practice to be tried more extensively than otherwise it would be, and there is great responsibility in such a use of authority. But the days are gone for enjoining a practice on the strength of mere authority apart from personal or clinical experience; and we cannot doubt that the profession will agree with us in thinking that Sir THOMAS WATSON would have done better to withhold views on this momentous subject till he was able to support them by some facts, either within his own observation or which it was in his own power to certify.

The general opinion of the profession, supported by an extensive observation of facts, both in England and India, is in favour of restraining the diarrhœa. A correspondent of some authority, Mr. SEDGWICK, whose letter will be found in another portion of our columns to-day, expresses the common opinion of the merits of the two plans of treating the first stage—viz., that which aims at restraining the diarrhœa, and that which aims at evacuating the motions, which are supposed to be channels of elimination of the poison. It seems clear to us that the indication of treatment in the first stage is to keep the blood intact, as far as possible, by restraining the diarrhœa. We do not mean here to justify this opinion, though it would be easy to do so. Even in Dr. JOHNSON'S hands in King's College, 13 out of 21 cases treated with castor oil died during the last epidemic; notwithstanding this and a general adverse opinion, Dr. JOHNSON and Sir THOMAS WATSON boldly advocate the use of castor oil again. Where all treatment is so much at fault, it would be wrong to be intolerant of any. But a treatment so homœopathic as this, and withal so apparently serious in its effects, should be tried under very strict conditions and before impartial witnesses in a way that would enable the profession to come quickly to a definite conclusion. Under all the circumstances of the case, we hope that this point in the therapeutics of cholera will be thoroughly studied by a special committee of each medical Society. Only in this way can the question be set finally at rest. And life and the reputation of the profession depend on its settlement.

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THE recent meeting at Plymouth of the British Medical Association cannot fail to have an important influence on

that body, since the decision arrived at to remove the head-quarters of the Association from Birmingham to London must affect it for good or for evil. As a mere matter of business, we opine that the managers of the Association have shown wisdom in making the Secretary resident where the *Journal* of the Association is printed, and they will thus probably for the future be saved a mischance similar to that which caused five eminent members of the profession to leave the Association. At the same time, we cannot wonder if some of the provincial members of the Association, for whom it was originally founded, should dread lest the whole of its management should pass into the hands of a few second-rate metropolitan men, or even become practically vested in the hands of the editor of the *Journal* for the time being. To guard against the former contingency, we would urge the Association to endeavour to enlist the services of some of the leading men in London, who, though willing enough to deliver addresses when requested to do so, have hitherto fought shy of having anything to do with the management of the Association, for various reasons into which we need not now enter. To meet the second possible difficulty, it is only necessary for the committee which has been appointed to select a secretary, to offer sufficient inducement to an able man, and to take care that his duties are strictly defined.

The recent meeting seems to us to have proved conclusively the mistake of dividing the Association into sections for the reading of papers. The practice originated in Dublin in 1867; and four sections—Medicine, Surgery, Midwifery, and State Medicine—are now regarded as *de rigueur*, with the result that none were well attended at Plymouth, and that all but one collapsed from want of an audience on the third morning. There is already a committee of selection of papers, and if that committee would rigidly enforce brevity, the papers might be read in the general meetings without difficulty; and if, by previous announcement, it was understood that a certain class of papers was to be taken at a certain time, those interested in them would attend to discuss them, and others would feel at liberty to enjoy other attractions. At present, with four sections always in session, constant attendance is impossible, and science is deserted for pleasure.

The Address of Professor LISTER was, as our readers will have learnt from last week's summary, a recapitulation of the author's views on the antiseptic system of surgery. Nothing new was advanced in support of the doctrines inculcated, and disbelievers in the marvellous efficacy of carbolic acid could not fail to notice that with every public appearance Professor LISTER's solutions become weaker and weaker, while his faith appears to grow more and more. We are not prepared either to profess or to confute Professor LISTER's views at the present moment; but we would venture to ask whether it is perfectly certain that air *does* pass into and out of the small flasks with bent tubes on which he lays so much stress, and whether larger flasks would give the same results?—also, whether it is true, as commonly reported, that his successor in the Glasgow wards obtains equally good results after operations without the employment of carbolic acid?

WE have seen with regret the attacks on the QUEEN, based on Her Majesty's absence from evening entertainments and on her brief residence in London. Now the fact is—and the more widely this fact is known, and the more plainly it is stated, the better—Her Majesty is not physically capable of bearing the effects of crowded or overheated rooms, or of prolonged residence in London. The effort of entertaining in the evening produces great and immediate discomfort, followed by sleeplessness or disturbed rest and severe headache; and Her Majesty rarely visits Buckingham Palace without suffering in a similar manner.

The profession will readily, without our entering more fully into so delicate a subject, understand the necessity for Her Majesty's medical advisers exercising the greatest diligence to prevent the recurrence of these symptoms. It would appear as if some persons must forget that the QUEEN is a lady nearly fifty-three years of age; for they talk as if they expected her to possess the same remarkable physical vigour and nerve-power she exhibited twenty years ago.

# Medical Annotations.

"Ne quid nimis."

## THE ARMY MEDICAL DEPARTMENT.

A MAN has only to take up an occupation as an amateur, and to throw himself into some popular movement with a little enthusiasm, to reap a good deal of credit in the present day. The newspapers get filled with the doings of volunteers under the Red Cross, but the "regulars" are regarded as nothing but dullards, that cannot rise above official prejudices, and are more impermeable to knowledge or new ideas than their waterproofs to wet. The medical officers of our own army, for instance, are, it is well known, neither "skilful nor experienced," for the Austrian Commissioner with the Abyssinian Expedition hath declared it Whether going up and down mountains, which formed so prominent a part of the Abyssinian campaign, is calculated to exhibit the "skill and experience" of military doctors, we do not pretend to say; but we should be glad to know whether the Austrian Commissioner was in any way qualified to give an opinion on the matter. With such men as he depicts in the service, what is to become of the patients that fall to the lot of those who are outside it, rejected at the competitive examinations? The junior ranks of the Army Medical Department are, no doubt, disheartened by tardy promotion, and the cultivation of their professional studies may fail to open out any way to advancement. These are things for which the medical officers may thank their masters; and they owe about the same measure of gratitude to the *Army and Navy Gazette* for the generous assistance that that journal has always extended to them. When the advocacy of a cause is made the occasion for conveying abuse at the same time, the medical officers, like the sailor with his grog, might prefer it "neat." With regard to the sketch, so far as it is correct, which that journal gives of the Prussian medical system, and the organisation of the Krankenträgers, we may say that long before Baron Stoffel urged on his Imperial master in 1868 to imitate it in the French army, medical officers had urged the adoption of a similar system in our own army; and it was probably due to the class of men with whom the *Army and Navy Gazette* is popular that the suggestion failed to receive attention.

We are given to understand that the subject of ambu-

lance and transport for sick and wounded soldiers has been for some time under the consideration of a War Office Committee, and that their labours are nearly completed. Now that the Director-General and the War Office have finished with the transport of the sick soldier, they may, it is to be hoped, turn their attention to the sick medical service, and see whether its complaint of no promotion cannot be remedied.

## CHOLERA, FALSE AND TRUE.

Now that another visitation of our shores by Asiatic cholera seems to be imminent, or at least highly probable, it is hardly possible to be too cautious in giving currency to rumours that the disease has actually appeared. It is very possible that errors upon this point may arise from our unfortunate nomenclature, and especially from the use of "choleraic" as a descriptive adjective. Diarrhœa is only one symptom of cholera, and not the most important one, since there are many instances on record in which people have died from cholera without diarrhœa having occurred. But a sharp attack of diarrhœa is often attended by cramps and by great prostration, and hence has received the misleading designation of "choleraic diarrhœa." It cannot be too widely known that cholera, although often preceded by what has been called premonitory diarrhœa, is a disease *sui generis* from its commencement to its close, and quite incapable, as far as we know, of originating in our climate from the influence of those insanitary conditions which foster and increase the poison when once it has been introduced. The so-called "choleraic" diarrhœa, therefore, is not a form of cholera, or a first stage of it, or even a milder variety; but is something altogether separate and distinct. It may prevail when cholera prevails, just as scarlet fever and small-pox might both be epidemic at the same time; and it is sufficiently often a cause of death to figure largely in the returns of the Registrar-General, and to justify alarm when it attacks the feeble, the very young, or those advanced in life. But no medical man, who has seen much of Asiatic cholera, should mistake the one disease for the other; and our caution to practitioners may therefore be confined to pointing out the possibility of a misleading use of words. The English cholera, or choleraic diarrhœa, or sporadic cholera of the bedside, may easily be called "cholera" by non-professional persons, and then Asiatic cholera by neighbours, until a simple malady is made to furnish a line of capitals in the sensation placards of the evening papers; and in times like these the spreading of consternation in a locality is itself no small evil.

## HEALTH OF ENGLISH WATERING-PLACES.

THE Registrar-General, in his last Quarterly Return, has given a special report on the state of the forty-seven principal English watering-places, and he makes the gratifying announcement that they are "unusually healthy." Unfortunately, the information thus given can only be accepted as approximatively correct, in consequence of the facts being all stated for the registration district or sub-district areas in which the watering-places are located, and which in a majority of cases differ considerably from the watering-places themselves. This distinction requires to be kept in view when we read that the "forty-seven *places*" referred to contained at the recent Census above a million inhabitants, among whom the death-rate last quarter averaged only 18 per 1000; still more when it is said that the death-rate ranged from 12 (per 1000) in Folkestone and 13 in Weston-super-Mare, to 25 in Aberystwith and 28 in Weymouth—meaning the four sub-districts in which these four towns are situate not the towns themselves. How far the health-condition of the two areas agrees in these four cases, as well as in the other forty-three, is a point left altogether in doubt. All we can say about the Registrar-General's facts is, that they show that in the districts or sub-districts containing fifteen seaside resorts the death-rate was below the healthy district standard of 17 per 1000, and that among these are included Yarmouth, Lowestoft, Southend, Herne Bay, Margate, Ramsgate, Folkestone, Hove, Worthing, Littlehampton, Sidmouth, Dawlish, Teignmouth, Torquay, Ilfracombe, Weston-super-Mare, and Blackpool. The low death-rate from all causes is in most of these cases coincident with a low mortality from zymotic disease; but there are exceptions, such as the sub-districts of Herne, Shoreham, Torquay, and Ilfracombe, where the zymotic mortality is above the average rate; while, on the other hand, there is the Creuddyn sub-district (Llandudno), where the general death-rate is 23 per 1000, the rate from zymotics being exceedingly small.

There may, of course, be good and sufficient reasons why no nearer approximation to the true death-rates of the watering-places can be given, but if there are it would be well to state them. Most of the towns are either municipalities, or have Local Boards or Improvement Commissions, with areas defined for sanitary purposes, and there ought to be no insuperable difficulty in getting the registrars to distinguish the deaths occurring within those areas. And the Census Act of 1871 required that the population within sanitary areas should be separately recorded—a provision which was made for the first time on this occasion, no doubt to remove one difficulty previously existing in the way of getting at the death-rates within those areas. But so long as the deaths continue to be abstracted and published in registration areas only, nothing can be done. We hope that one early result of the amalgamation of the Registration and Sanitary Departments under one administration will be to bring our vital statistics more into harmony with the requirements of sanitary science, and that by the time another summer comes round the Registrar-General will be prepared to give us a table of watering-place death-rates which will be of real use.

## THE NAVAL MEDICAL SERVICE.

THE medical branch of the navy has one distinction which hangs heavily on it—it is the only branch that reckons its advantages by the scale of actual service, and not by seniority. This is based on its affinity with the medical branch of the army, in which, after twenty years, surgeons become surgeons-major; and so in the navy surgeons must needs serve twenty years also on full pay before they are rated staff-surgeons. But on this point there is a great want of analogy, because army service is, as a rule, continuous, while that in the navy is, as a rule, broken by intervals of compulsory half pay. Thus in the army a surgeon obtains in twenty years the rank which it takes the navy surgeon twenty-three years or more to acquire. The principle of compensation for this is already conceded so far that, by Order in Council of 1867, the navy surgeon was granted increase of full pay at four-year periods against five of army service. Had that principle been carried to its legitimate conclusion, the naval surgeon should have had equal rank with the army surgeon-major at a relatively earlier period. Thus, an untrue external affinity has led to an unfair difference within the service itself, where precedence, choice of quarters, &c., regulated on opposed principles, are frequently vexatious to the naval medical officer; for he must have served twenty years on actual full pay to get what those around him possess after being fifteen years on the senior list, partly on full, and partly on half pay. This is the vexation of each officer. It

is a deep injury to the whole naval medical service that their widows and children are treated differently from those of other officers in accordance with two rules of twenty years' full pay and of fifteen years' seniority; so that the relicts of medical officers of nineteen years and ten months' full-pay service find themselves entitled only to the same pensions as those of paymasters and engineers of fifteen years' seniority.

It is scarcely conceivable that such anomalies exist in the public service, but it often happens that a strong case is all that is required to bring the matter to the point where rectification follows. We lately gave an obituary notice of a respected naval surgeon, who died from an injury received in the actual performance of his duty, and we mentioned that this officer had been twenty-three years in the navy, always anxiously seeking employment, and yet at his death there were still wanting a few weeks of twenty years' full-pay time to give him the rank of a surgeon-major, which he would have had in the army three years before. We regret to learn that in a case so unusually close as this, the Admiralty have adhered to the strict letter of an unfair rule of the service, and have awarded the widow of a surgeon who died in the execution of his duty after twenty-three years in the navy, and nearly twenty years on full pay, a much smaller pension than she would have had a right to had her unfortunate husband survived another two months, or had he been a paymaster or engineer with the seniority he completed in 1863. The profession at large can never rest satisfied under such disparities, and we trust that the Government will see the necessity of rectifying this and other discrepancies that touch the highest interests of the medical officers in their employ.

## WHAT TO DO IN HOT WEATHER.

IF the sun has been tardy in showing himself this summer, he has lately been making up for his absence; and there are many who would gladly put into execution Sidney Smith's droll suggestion and "sit in their bones" if they could. In England, where cold winds and damp weather make up so much of the year, and increase so greatly the mortality rates, we are apt to forget that it is the hot weather in other places that is commonly associated with an increase of sickness and mortality. Our friends at New York, for example, have reason to dread the hot months of the year, for much of the disease and mortality that there prevail is directly attributable to the increased temperature. Heat-apoplexy, uncommon in this country, is frequent enough there; and diarrhœa or summer cholera, among infants more especially, causes a great number of deaths. We are only just learning in this country the best way of guarding against the heat—viz., by the frequent use of ice and iced drinks, by the employment of the lightest clothing, and, above all, by sea bathing and frequent and copious ablutions. So that the head be properly protected against the direct rays of the sun by the use of some well-ventilated head-dress, the lighter and looser the remainder of the clothing is the better. There is nothing more grateful than the use of cold or iced water, especially in the case of soldiers on the march, or of children indisposed from the effects of heat. It serves the double purpose of directly abstracting heat from the body, and of supplying fluid to be passed off by the skin as perspiration. Of course we are assuming that the water is pure; otherwise, with threatenings of a possible cholera epidemic, of would require some confidence and courage to imbibe the water supplied by any water company, or obtained from a well. In cases of sunstroke, as everyone knows, the thing to be done is to abstract the heat from the body as quickly as possible. We heard a surgeon who had long served in India once remark that he always looked whether a muddy well were near the place where he intended encamping, because, in the event of any of the men showing signs of sunstroke, his plan was to souse them in the water and plaster their bodies all over with the mud. The men were curious objects to look at after this treatment, but it was very effective. Heat depresses, and people are very apt to have recourse to a little brandy occasionally, repeating the dose from time to time. As a rule, alcohol is bad; there is no great objection, however, to a light wine, such as claret, or to the use of tea or coffee.

## PUERPERAL TEMPERATURE.

MR. SQUIRE has reprinted in a separate form his observations on Puerperal Temperature. He incidentally observes that the temperature of the vagina rises before the catamenia appear, and quickly falls afterwards. The temperature of the body is somewhat increased in the latter months of pregnancy. The commotion and efforts of natural labour, if not prolonged, do not seem greatly to elevate the temperature of the patient, even if accompanied with considerable agitation, heat, and perspiration. The temperature of the vagina appears to increase towards the end of labour. In one such case half an hour before delivery it was 99·9°, while only 97·8° in the axilla. In another case, more rapid but less severe, the vaginal temperature was 99·1° twenty minutes before the expulsion of the child, and exactly 99° ten minutes after. The temperature rises more in prolonged labour, and in proportion to the severity and duration of the muscular exertion required. In such cases a temperature of 100° to 101° is by no means infrequent, and 102° or more has been reached. It soon subsides after labour to the normal standard, generally in the first twenty-four hours. Sleep favours the gradual decline of temperature, and *vice versâ*.

The well-known elevation of temperature in connexion with the commencement of the function of lactation is illustrated by Mr. Squire. The commencement of this reaction is most regular. It attains a certain prominence forty-eight hours after the birth of the child. The termination of the reaction is very variable, and slight causes suffice to produce disturbances of temperature, such as a sore nipple or a slight inflammation of the breast. In primiparæ the milk process is more slowly settled, and the normal temperature is not recovered so soon or so reliably as in other cases where the process of lactation has become a habit. In two of the three primiparous cases the temperature rose respectively to 102° and 104·37°. In the last case it is remarkable that a high temperature was maintained for twelve days without either the breast or its function suffering. The cause of the elevated temperature was not quite clear. The state of the perineum is not referred to, and the patient made a thoroughly good nurse. In two cases in which the ordinary fall of temperature did not follow the formation of milk, the result seemed due to the use of alcoholic stimulants. In one, abscess followed; in another it seemed averted by withholding stimulants. Mr. Squire thinks stimulants safe and beneficial if the temperature is low and the secretion of milk copious. He should be more specific as to the nature and amount of the stimulants to be recommended. Evidently, care is requisite in the use of them, and attention to the idiosyncrasies of patients. Mr. Squire properly insists on the necessity of good food in the puerperal state and during pregnancy, but thinks that stimulants should be a matter of special order. Incidentally, he notices the action of the bowels in his puerperal cases, and gives very qualified praise to the use of castor oil in the cases in which it was given. An enema would have been better in some of the

cases, in which the oil seemed to check the formation of milk. It is to be hoped that Mr. Squire will continue his observations on the puerperal state, and the best way of treating it. His cases are interesting, but still too few to afford a basis for general conclusions. His observations on points of diet, on the use of chloral and chloroform, though suggestive, also need multiplication.

## THE CONTAGIOUS DISEASES ACTS.

ACCORDING to notice, Mr. W. Fowler, upon the House going into Committee of Supply on the Army Estimates, moved the reduction of the amount of the vote for the Control establishment, wages, &c., by the sum paid to the police acting under the Contagious Diseases Acts. His speech was simply a reiteration of the old arguments. Mr. Henley, who followed, took up a stronger position. His opposition to the Acts was mainly based on the ground that he deemed them unfair in that the sexes were not equally dealt with; that the tempter, in defiance of Christian and heathen ethics, was practically regarded as less blamable than the tempted; that the treatment was inflicted for an immoral purpose; and, lastly, that the reasoning of the Commissioners should not go down with the Government, as it certainly would not with the country. He had not a word to say against hospital accommodation. If we were to stay our hands against relieving human misery because it was produced by human sin, little indeed would be done. Fully sympathising with the spirit of Mr. Henley's speech, we must altogether dispute the correctness of his premisses. The persons coming under the Act are public women; they pursue their occupation as a trade, and they have only to relinquish it to rid themselves of all interference by the police. There is and can be no parallel between the sexes in these respects. Mr. Bruce dwelt upon the amount of good that had been undoubtedly done under the Act, and appealed to the House to support the Government in refusing to expose the unfortunate women themselves to all the dangers from which they had escaped, by repealing those Acts without providing any substitute for them. Mr. Cardwell likewise demanded that the Government and the country should have time to consider the evidence. Mr. Tipping, it seems to us, made some very practical remarks. After alluding to the bearing of historical facts, he pointed out that the laws in Prussia were even more stringent than in France; and he thought that if the mass of the people in this country really understood the question, they would not be led away by the calumnious misstatements that had been made. Several other members, including Mr. Mundella, having addressed the House, a majority of twelve out of one hundred members present voted against Mr. Fowler's motion.

## ANYTHING BUT SCOT-FREE.

OUR brethren on the northern side of the Tweed have lately given the world a lesson as to the uses to which departed greatness should be applied. Hamlet tells us that—

> "Imperious Cæsar, dead and turned to clay,
> Might stop a hole to keep the wind away."

The Scotch, however, know better than this; and their practical wisdom has shown itself by applying something even less substantial than the clay, to stop a hole of quite a different character. Their country has been gifted with one of the greatest writers of any age or race, one who in the power of stirring the higher human emotions has, if equalled, at least never been surpassed; and, on the approach of the hundredth anniversary of his birth, people were eager to come from all parts of the world to do honour to his memory. Not only from every land in which English is spoken, but from many in which the works of the Wizard of the North can be known only by translations, men turned their steps to the city which, by song and story, he had made so glorious. Modern Edinburgh was equal to the occasion. She washed her statue of Allan Ramsay, and decorated her streets with plaster busts and coloured calico. Her young bloods rested from pelting and insulting women, and her graver citizens made all due preparations that the expected strangers might be taken in. She announced a "festival" in honour of the day, and obtained from distinguished men promises that they would attend. "In order to save time," they were then told, the festival was not to be attended by feasting, but the visitors were to partake of a repast of fruit and wine. When this is turned into English it means that two thousand people were brought together by their veneration for Scotland's greatest name, and that they were made to pay each a pound — for a glass of Hamburg sherry, a handful of gooseberries, and a piece of sponge-cake! We should be glad to hear to what charity the profits of the undertaking will be applied.

## THE MAURITIUS AGAIN.

IT has been wittily remarked that the only safe plan of prophesying in the present day is the "I told you so" method. At the risk of being numbered among those who indulge in the, by no means uncommon, custom of reminding the world whenever they happen to have been right, but of maintaining a discreet reticence whenever they happen to have been wrong, we may declare that we are not the least surprised to find that the latest news from the Mauritius is not reassuring. We have all along contended that, if the sickness and mortality at that station were really due to malarious causes, nothing short of the execution of some wholesale and radical sanitary engineering scheme would overcome them. The epidemic character of a disease depending so exclusively on local as opposed to personal conditions—such as those of soil and climate—was certainly a very striking phenomenon, and was due, in all probability, to some very exceptional meteorological states. The sickness and loss of life, it will be remembered, during the latter months of one year were almost unprecedented, reminding one of the accounts of Jewish rather than of modern history. From that time to this, malarious disease has been rife in the island, alternating of course with the different seasons, and relatively far worse in one year than another, but still never absent altogether. The local authorities have not the funds to carry out the required sanitary measures; and even if they had, it is more than probable that time is a necessary element in a matter where great changes require to be undergone by the soil before it loses its malarious properties. We now learn that malarious disorders have again increased in frequency and severity, as well as in extent of area. Portions of the island that were once free are no longer so, although Port Louis still retains its prominent position for insalubrity. The aged, the sickly, and the very poor have probably in great part already succumbed during the last few years of prevailing sickness. The troops have, on the whole, remained in fair health, owing to the better diet they obtained, and, still more, to the large amount of quinine they have consumed. The cost of the soldier in the Mauritius in the matter of quinine might well form the subject of a question in the House of Commons. Still, many of the troops that have had to visit or been stationed in the low-lying districts have contracted intermittent fever, from the symptoms of which they may, as everyone knows, suffer long after they have left the station. And the question arises, whether they had not better be with-

drawn until the island has become more healthy? It has been many times recommended to maintain the European force permanently in the highlands; but for want of proper accommodation for them, we believe, this has only been partially carried out. From a report showing the state of her Majesty's colonial possessions, lately presented to Parliament, we learn that the total number of deaths registered in the year 1869, at the Mauritius, exclusive of those belonging to the military, shipping, and dependencies, was 11,295, against 18,640 in the preceding year. The total death-rate of the island was 35 per 1000 of the population. Fever was the registered cause of 6330 deaths. The proportion of deaths from fever to total deaths, amongst the general population, was 44 per cent. The number of deaths from fever exceeded that from all other causes in each of the first seven months of the year, as it did in 1868. Dysentery and diarrhœa also proved fatal in many instances; and phagedænic ulcers and hospital gangrene, probably sequels of malarious fever, caused 100 deaths, the vagrant depôt furnishing numerous cases.

## CHOLERA AND THE PORT OF LONDON.

IT is gratifying to know that the northern and north-eastern ports of the kingdom are now placed in a fair position of sanitary self-defence against cholera. The work so energetically accomplished at these ports is but a fractional part of the labour necessary to place in a satisfactory condition the sanitary arrangements of the mercantile marine. The Privy Council have yet to attack the port of London, and we are glad that this duty has devolved on Dr. Buchanan. We know perfectly well that he has no easy task. He will have to unite fragments of local self-government, to break down barriers of vested interests that were erected centuries ago, to rouse the Thames Conservators from a state of chronic apathy on all matters relating to health that is as dangerous as it is disgraceful, to appease the fear of those who fight for freedom of action on commercial grounds, and, when all this is done, to organise a system of surveillance for the wealthiest, most populous, and worst-arranged port in the world. This surveillance to be effective should include the docks as well as the river. Of the former there are six on the north and two on the south side of the Thames; and the latter, from London-bridge to Gravesend, comprises thirty miles of waterway, four of which are thickly studded with vessels of all classes. The difficulties in the way of organising and exercising efficient supervision in this port are twofold. The first consists in the large number of local authorities connected with the river. The second is caused by the very diffuse geography of the port. It has been Dr. Buchanan's first aim to advise unity of action among these local authorities, and we may hope that before this article appears he will have induced the local authorities to place the sanitary charge of the river in the hands of a competent superintendent, and legally delegate their powers to him. When unity of action is accomplished the entire success of the scheme must necessarily depend upon the officer appointed by the local authorities to carry it out. He should be furnished with plenary powers (similar to those exercised by the medical officers of health) to enforce the provisions of the Order in Council recently issued as to all vessels and their occupants between London-bridge and Gravesend, and he should co-operate with the Customs officers at the latter town, which may be properly called the gate of the port. We shall await with interest the result of Dr. Buchanan's exertions. We think that, judging from the experiences of 1866, those in authority might very fairly take a leaf out of the book of the Seamen's Hospital Society.

## THE FLY IN ITS SANITARY ASPECTS.

No wonder that "a laugh" was evoked a few days ago in the House of Commons when Sir John Lubbock gave the following extract from one of the books used in elementary schools: "The fly keeps the warm air pure and wholesome by its swift and zigzag flight." Such a statement is alone sufficient to justify the assertion of the speaker—himself, by the way, no mean authority on insects and their habits—that such books were "full of ambiguities and errors."

Apart from the consideration that the fly which is about to become a mother must frequently alight upon some decomposing matter in order to find suitable pasture for its maggot-progeny on its emergence from the egg, there can be no doubt that these insects, far from keeping the air pure and wholesome, are frequently the carriers of that which is impure and unwholesome—notably the secretions from unhealthy wounds. Anyone who has been in a war-hospital in the summer months will have had this brought prominently not only before, but may be into, his eyes. The ophthalmia, too, which is said to be endemic in Egypt, must in some measure be kept a-going and be in some degree aggravated by the swarms of flies which the lazy dwellers on that soil do not bestir themselves to brush away from their constant station on their bleared eyelids. He who has witnessed or who has only read of such things, spite of the assurance of purity of intention on the part of the flies, will, when watching them in their circling gambols beneath the ceiling of his chamber, far from looking upon them as dipterous angels dancing attendance on Hygeia, regard them rather in the light of winged sponges speeding hither and thither to carry out the foul behests of Contagion.

## THE METROPOLITAN POLICE FORCE.

THE Report of the Commissioner of Police for the Metropolis, just presented to Parliament, furnishes us with some information from Mr. T. Holmes regarding the health of the force during the year 1870. The statement of sickness does not present much variation from that of the previous year. The total strength of the metropolitan police on the 31st of December, 1870, was 9160. The mean strength, calculated from the number of men of all ranks for whom payment was made to the divisional surgeons, may be taken at 8700. The total average daily loss from sickness in 1870 was 307·6, or at the rate of 3·3—being, in fact, 4 per cent. less than in 1869. In seeking to diminish the daily loss from sickness, which in 1866 was as high as 5·5 per cent., it was considered expedient to reduce the number of men on "detached" leave, the great majority of whom, in reality, never became able to resume duty. And Mr. Holmes is still of opinion that the percentage of sickness might be further reduced to some extent by more strict medical supervision, now rendered impracticable on account of the abodes of the men being so much scattered about, and in many cases at great distances from the divisional surgeons. Mr. Holmes is opposed to and would forbid the men belonging to sick clubs, in consequence of the pecuniary advantages they reap from these clubs when sick, making it to the interest of the men to keep upon the sick list. Another suggestion is, to found a central hospital to which severe and doubtful cases could be sent—a measure which would, however, involve an increased expense, though it would afford greater facility for the detection of imposture and for efficient treatment. Mr. Holmes remarks that, in instituting a comparison between the health of the metropolitan police and that of the military, it must not be forgotten that the men of the former can quit the service when they please for some other employment, a privilege the soldier does not enjoy. The nature of the policeman's warfare and

the number of his battles may be surmised from the number of fractures, wounds, and miscellaneous injuries sustained by the force, which amounted to 1069 in the twelvemonth. The monthly record of diseases of exposure gives a gross total of 3795, and shows at the same time how great is the excess in sickness caused by diseases of this character, and how much those diseases fluctuate with the season of the year. For example, whilst 502 and 481 represent the gross total of pulmonary diseases and rheumatism for the months of January and December, 164 represent the monthly total in July of the same affections.

## THE EXPLOSION AT STOWMARKET.

A FEW days only have passed away since our greatest authority on the subject, Professor Abel, was lecturing before the British Association upon the comparative immunity from danger afforded by recent improvements in the manufacture of gun-cotton. It is a sad commentary upon his discourse that so many valuable lives should since have been lost, and so much property destroyed, by the terrible explosion with the details of which our readers are before now familiar. There seems to be reason to hope that the explosion was produced by a description of gun-cotton known to be unsafe; and that our faith in the improved variety may, after all, be suffered to rest undisturbed. But, until this is clearly proven by the pending inquiry, the occasion seems to suggest that no presumption of safety should prevent the Legislature from surrounding the manufacture of all such articles by very stringent regulations, and from removing them to places distant from town populations. Much of our sterile moorland is sufficiently near railway stations for purposes of transport, and would afford sites, for the manufacture of explosive materials, on which no harm could be done to any but those employed in the work, who of course engage in it with their lives in their hands. If these sites involved higher expenditure, higher wages, additional cost in obtaining water, and so forth, such would form perfectly legitimate grounds for an increase in the price of the finished product; and even a large increase would make but little difference in the demand for its employment. But it seems certain that the inhabitants of a thriving country town ought not to be exposed to the risk of being suddenly killed or maimed, and of having their houses brought piecemeal about their ears, merely because a firm chooses to manufacture gun-cotton in their vicinity.

## VOLUNTEER CAMP AT SHOEBURYNESS.

WE are informed that no serious cases of disease or accident have occurred at the camp of the National Artillery Association at Shoeburyness to mar the success of the week. About 120 patients have received medical treatment, the majority having suffered from the action of the heat on the face, causing great ecchymosis of eyelids and forehead. Some cases of diarrhœa and colic occurred, especially at the onset of the meeting; and one case of small-pox, which was immediately removed to the Royal Artillery Hospital in a ward situated away from the main building. The camp was provided with hospital and dispensary tents, the latter containing regulation medicine chests, with instruments, by order from the War Office. The medical staff consisted of Mr. Wickham Barnes, F.R.C.S., with Drs. Arthur, Corbett, and Willing, assistant-surgeons. These gentlemen are unanimous in recommending that on all occasions volunteers should come provided with the head-gear as worn in India, and loose holland blouses. They express themselves as under much obligation to Colonel Chermside, the Camp Commandant, and to Dr. Hannen, R.A., for their courtesy and attention.

## HOSPITALITY IN THE WEST.

THE hospitality displayed by members of the profession in and around Plymouth towards their brethren of the British Medical Association was such as to require notice and acknowledgment at our hands. Not only did members resident in the three towns put themselves to great inconvenience in order to receive and entertain gentlemen, many of whom were unknown to them except by name, but practitioners at a distance from the centre of attraction went out of their way to offer a welcome to their professional brethren. This was particularly the case with the Messrs. Kerswill, of St. Germains, and Mr. V. P. Calmady, of Wembury. The former gentleman entertained a party of over a hundred gentlemen and *two* ladies at a *recherché* luncheon, spread in the beautiful orangery of Earl St. Germains' garden, and afterwards conducted their visitors over the charming grounds around them. The latter, in conjunction with Mr. J. D. Lewis, M.P., received some eighty members who visited the Yealm, and entertained them sumptuously in a wooded valley near Wembury church. Such meetings cannot fail to do good by establishing a fellowship between medical men who would not otherwise be brought together; and though some may think that scientific aspirations may be too readily sacrificed at the altar of conviviality, we should regret to see the hospitable intentions of our brethren frustrated by too close a devotion to that *dura mater*, Science.

## THE ARMY QUESTION IN FRANCE.

M. GUSTAVE LAGNEAU has published, in the *Gaz. Hebd.* of Aug. 11th and preceding numbers, a valuable essay upon the mode of recruiting an army. He shows that a standing military force is baneful in many respects. The mortality, in time of peace, among French soldiers is double that among the civil male population of the same age. Barrack-life engenders phthisis and typhoid fever. Forced celibacy of so many valid men is detrimental to the legitimate increase of the population, and favours natural births. Prostitution is forced upon a country which keeps up a large standing army. All these evils would be lessened by imitating the Prussian system: obligatory military service for all, limited for active co-operation to one year, with occasional drilling, &c. The author winds up by observing that "the Prussian system was instituted after German disasters in the wars against Napoleon I. Austria, after Sadowa, adopted the same mode of forming an army; and it is to be hoped that the misfortunes of Sedan will induce France to adopt analogous measures."

## SUPPLY OF DRUGS TO THE POOR.

WE have every reason to believe that our proposal with respect to the supply of drugs for the workhouses and Poor-law dispensaries would be gratefully received by the guardians as well as by the Poor-law medical officers in the metropolis. The fact is that the guardians feel themselves quite at a loss to exercise any control whatever over what they regard as the whims and extravagancies of their medical officers; and they view with alarm the increase in the cost of drugs which has resulted from the introduction of dispensaries. The guardians, moreover, find that the system of contracts does not very well apply to drugs, many of which require careful examination and analysis in order to determine their purity or their similitude to sample. They are thus driven to rely on the integrity of the chemists and druggists, and they pay accordingly. As the cost of drugs &c. is defrayed from the common Poor Fund, it would be far better to place the whole question of drug-supply in the hands of the Metropolitan Asylums Board or of a

special officer. Contracts would then be entered into with special importers and manufacturers, and the goods carefully tested as they come in. The Poor-law Board could then easily issue a suitable pharmacopœia, and some control would be exercised over the waste and extravagance of which the guardians complain. At the same time the arrangement would be very acceptable to the medical officers; for instead of being supplied, as they are in some cases, with articles manifestly below the market value, they would be ensured the use of genuine remedies, whilst the issue of a pharmacopœia would greatly diminish the trouble of prescribing for their patients.

## A HAPPY WATERING-PLACE.

THE local "organ" of Worthing is much elated at the recent announcement by the Registrar-General that that seaside resort is one of the towns which "were most conspicuous for their freedom from deaths of a zymotic character." We presume it was freedom from disease of a zymotic character causing death to which the Registrar-General referred; for though we are familiar with *pallida mors*, we had not heard before of "zymotic death." Be that as it may, however, we congratulate Worthing and its inhabitants on their clean bill of health; and are happy to find that the cleanliness extends also to the morals of the town, for we are gravely assured, in an editorial article "On the Moral Aspect of Worthing," that "when, out of a population of 8500, and that rapidly increasing, we are not annoyed by the existence of a single specimen of the class termed 'unfortunate,' we have just grounds for stating that our town is an exception to the rule, and such being the case, we feel proud of being able to make this public statement."

THE Brecon *County Times* of last Saturday contains a long letter from Dr. Talfourd Jones, physician to the Brecknock Infirmary, giving particulars as to the prevalence of small-pox in Brecon. The number of the cases is stated to be 42, and the deaths 5, and that 39 out of the whole number were in the parish of St. John, and 9 of these cases had never been vaccinated. The writer adds, "It is indeed sad to think that as many as 23 per cent. of these cases were totally unprotected by vaccination." We commend this to the consideration of the Board of Guardians.

WE continue to export small-pox to other countries, and New York has been much favoured in this respect. A vessel arrived at that port from Cardiff with two of her crew dead and others sick. The last advices from Australia record that, in consequence of frequent importations of small-pox, all vessels ariving at Melbourne from England are put into quarantine. A steam-ship from Southampton recently arrived in Table Bay, and, having small-pox on board, was placed under a twenty-one days' surveillance.

A VESSEL has recently arrived at Queenstown with all the members of her crew more or less affected with scurvy. Two died shortly after the arrival of the ship. The Board of Trade, having been informed of the matter, telegraphed to Queenstown immediately with a view to the institution of an official inquiry. But it was found that the vessel was not registered as belonging to Great Britain, so that no official or legislative action could be taken.

WE have seen with much pleasure that, on the recommendation of the Director-General of the Medical Department of the Navy, Mr. G. B. Newton, Surgeon R.N., has been promoted to the rank of staff-surgeon, for the able and zealous manner in which he has for several years conducted the responsible and onerous duties in connexion with vaccination, &c., in Japan, which he initiated, and with which he has been specially entrusted.

## DR. GUY'S LECTURES ON WAR IN ITS SANITARY ASPECTS.

IN his second lecture, delivered on June 9th, Dr. Guy compared the mortality from casualties and from disease in the army and navy. During the war which ended in 1815, the average naval loss was 20 per 1000 killed and wounded, but on certain occasions this was greatly exceeded. In the duel, for instance, between the *Shannon* and the *Chesapeake*, in a quarter of an hour there were 271 per 1000 killed and wounded. The relation between the loss by fighting and sickness respectively was shown in a table of Mr. Hodges, by which it appears that during the twenty years and a half of actual warfare, out of 100,000 deaths in the Royal Navy 10,525 occurred in action, 18,931 were drowned or burned, and 70,545 were from disease or accident; the latter seven times as numerous as those by actual fighting.

The examination of the influence of sickness itself in diminishing the number of fighting men is rendered very difficult by the impossibility of securing the same conditions in the cases under comparison. Both veterans and young recruits suffer much more than those in early manhood. The condition of the recruits and the degree of selection which can be practised influence greatly the subsequent health of the soldiers.

Dr. Trotter, physician to Lord Howe's fleet, gave some valuable reports on the health of the sailors during the war. He took charge of the fleet in April, 1794. It continued in good health, with the exception of a little fever, until the battle of the 1st of June. Among the fruits of the victory were six prizes containing a large number of killed and wounded, on which fatal contagious fever had prevailed for some time before the contest. Through prisoners taken on board the disease communicated itself to Lord Howe's fleet, and in about six weeks 800 men suffering from contagious fever were sent to Haslar Hospital. At this time the French prisoners near Portsmouth suffered a frightful mortality from fever, which spread even to the militia guarding them. The influenza of 1795 was another enemy of the same class. In six weeks 39 vessels had an average of 139 attacked per vessel; in one the number reached nearly 500. Scurvy figures largely and frequently in Trotter's reports for 1795–6. The price of provisions was high, and fresh meat served out only once a week; and, in spite of all efforts, the hospitals became filled with the disease. In whole squadrons every ship suffered. The whole country was laid under requisition for fresh meat and vegetables; but it was not until November, 1796, that the ships could be reported free. From gaol fever and small-pox the ships also suffered greatly in 1798; and these, with malignant ulcer, were the then prevailing maladies.

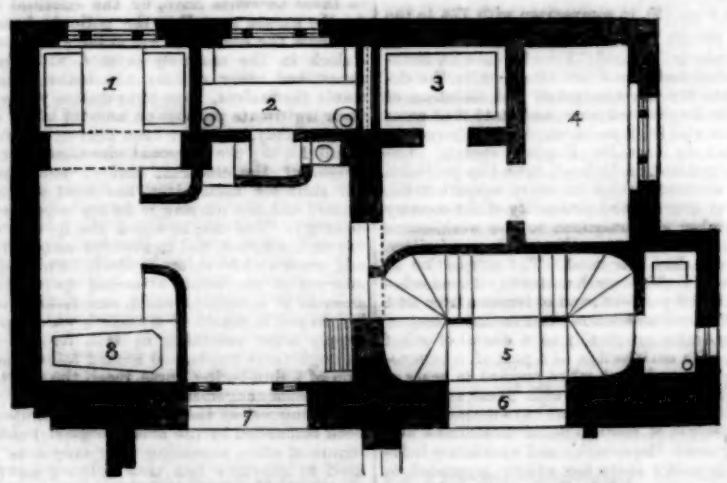
The history of syphilis in the fleet at this time affords an illustration of the unexpected quarters in which the most serious mischief may lurk. At the time Trotter wrote his abstract, in 1795, sailors were subject to a fine of 15*s.* for the cure of this disease. To avoid this they would resort to some of their messmates who pretended to the requisite skill, or to itinerant quacks at the seaports. Hundreds of seamen in consequence fell victims to the malady. The charge was stopped in consequence of Trotter's representations, with most salutary effect.

The lecturer next spoke of the diseases of the army. In comparing them with military actions it would be necessary, he said, to consider separately battles and sieges, and offensive and defensive operations. In eight offensive battles, fought between 1793 and 1815, in which 79,000 men were engaged, there were 12 per 1000 killed, and 62 wounded; total casualties, 74 per 1000. In nine defensive battles 24 per 1000 were killed, and 110 wounded; total casualties, 134. The successful sieges ending by capitulation yielded 8 killed and 54 wounded per 1000; when ending by assault, 38 per 1000 killed, 122 wounded; unsucessful

sieges, 27 per 1000 killed, and 90 wounded. It will approximate the true total if we say that 2 per cent. were killed, 9 per cent. wounded; giving a total of 11 per cent. total casualties. What, now, is the relative mortality from injury and from disease? Hodges has shown that prior to 1812 the total casualties did not exceed 4 per 1000, while the deaths from disease amounted to nearly 50; thus the loss by sickness was eleven times as great as by all forms of injury. After 1812 the losses by battle attained a higher figure, while those by sickness diminished. The lecturer then took Sir James M'Grigor's Sketch of the British Army in the Peninsula, read before the Medical and Chirurgical Society in 1815, as a record fairly comparable to that of Trotter for the navy, and quoted the statistics there given. In conclusion, he drew special attention to the tribute paid by Sir James to the temperance, steadiness, and regular habits of the German legions, as contributing in no small degree to their comparative immunity from disease; a tribute which might be paid to them now with no less justice. These qualities were as influential as their organisation in contributing to their success.

## THE NEW BATHS AT UNIVERSITY COLLEGE HOSPITAL.

A FEW months since we announced that the new baths at University College Hospital, now completed, would be opened by the end of May last. The delay has arisen from the fact that certain departures from the original plan calculated to make the baths more complete and extensive have been made, particularly in the portion of the baths specially designed for the treatment of the syphilitic, the contagious skin complaints, and the employment of sulphur, iodine, mercury, and antimony fumigations. The accompanying plan gives a good illustration of the arrangements




1. Mercurial and iodine vapour boxes. 2. Itch bath. 3. Disinfecting chamber. 4. Sulphur vapour room. 5. Staircase leading on the right to the general bath hall (not shown in the plan), and on the left to the disinfecting and fumigating baths. 6. Entrance to general hall. 7. Liquid sulphur bath.

of this section of the baths, the walls of which are cemented throughout, there being no paint of any kind, so as to prevent any discoloration of the chambers by the metallic emanations, which are carried away in a main flue that runs to the top of the hospital. On the left are two recesses walled off from the main room, in which the sulphuret of potassium baths and the mercurial and iodine fumigations will be given. There are here likewise boxes for steaming the arm and the leg. Each box has a special flue for carrying away from its interior the vapours and steam that are generated below, and rise about the patient. The volatilisation of metallic substances is accomplished by means of a peculiar gas flame which plays upon an iron floor, covered in turn by a perforated stone lining, an interval being left between them; and it is in the space between the iron and the perforated stone layers that the metals to be volatilised are placed. The products of the gas combustion are made to escape by a separate flue to the exterior from the space beneath the iron floor which is shut off from the bath itself. The same arrangement is adopted in the sulphur chamber. The itch bath is a novelty. It is so arranged as to form a kind of trough, and is capable of holding two or three patients at a time for treatment. They sit on a marble slab at the back, and have at either side a small shelf to place the parasiticide upon, in front a wash-basin with hot and cold water within easy reach, and above them a rose whence water can be turned for the ablution of the whole body. Dr. Tilbury Fox's plan of treatment is to give a good soaping, then to apply the parasiticide, potash and sulphur, to let it stay on twenty minutes, and then to wash the patients down. The place is well warmed, the recess is screened from view completely, and there is an outfall at the centre of the floor that carries off all water directly to the main drain. Adjoining the room, and entered by a special door, is the disinfecting chamber, which is heated by a flue passing from the front on the left beneath the floor to the right, up the right side, and over the top of the chamber. The contents of the chamber that escape are made to pass by a special flue through the fire itself, so as to thoroughly destroy them. In this chamber will be placed the clothes of the lousy and the itch patients during the time the former are undergoing a thorough washing, and the latter the process for the cure of the itch. All that is needed to cure phtheriasis, or, as it is generally but erroneously called, "prurigo senilis," is, according to Dr. Tilbury Fox, destruction of the pediculi and their deposited ova in the clothes which form their habitat. To the extreme right is a chamber for sulphur fumigations. The room has double doors, and is supplied with steam.

The Turkish bath in the other section of the baths, of which we have given a representation on a former occasion, is worthy of notice. It is heated by radiation, the flues being formed of fire tiles, and passing along three sides of the room, and thence to and fro beneath the floor. The object of having fire tiles is to avoid the use of iron, whose heated surfaces would induce to a greater or less extent a chemical change in the air. Fresh air is admitted by a special arrangement at several points of the floor, and it is warmed as it passes in. The inlet and outlet into the

chimney are guarded by valves which can be regulated at pleasure. The main object in view was to be able to always have a very pure air with a great heat in the chamber.

The general bath-hall, with its dressing platform, and its cemented and clean-looking walls, tiled floor, and its own special drainage, is fitted with the most varied kinds of ordinary and special baths for the treatment of general as well as cutaneous diseases. The warming is effected by steam coils, and there are special steam jets in the sulphur and mercurial baths, and in the Russian bath, which can be used with vapour if required.

The architect, Mr. Manning, and the contractors, Messrs. Jeakes & Co., have spared no pains to make the baths in every way a success, and they have accomplished their object. These baths are unquestionably the most perfect of their kind in existence, and we congratulate the hospital authorities upon their completion. The cost of the baths has been about £1500, but the money could not have been better spent.

## ANNUAL REPORT OF THE IRISH POOR-LAW COMMISSIONERS.

THE report of the Irish Poor-law Commissioners for 1870 is one of unusual interest to the medical profession. It teems with evidence of the close connexion which exists between pauperism and ill health; and whilst the question of economy is by no means lost sight of, a remarkable prominence is given to everything relating to the physical condition of the people, to the preservation of the public health, and to the relief of sickness amongst those persons who, if not promptly attended to, would soon become permanently dependent on the rates. Thus we have tables representing the annual mortality in workhouses, and the causes of death; and we are told that the number of deaths from fever is being steadily reduced. The deaths from this cause last year were 630, in comparison with 774 in the previous year, and 884 in the year preceding. Of the 32 deaths from small-pox in Ireland, 13 took place in workhouses. And the commissioners draw attention to the defective arrangements for the treatment and isolation of small-pox patients in English seaports, and state that cases have been received in the Irish ports which ought never to have been permitted to leave the English shores. The commissioners have insisted, in Ireland, upon the provision of proper hospital accommodation in every seaport town. It is a satisfactory evidence of the prosperity of the country to find that the number of admissions to the workhouses has decreased, and that the proportion of those admitted on account of sickness has increased. The proportion of able-bodied inmates of workhouses has steadily decreased—of males, from 10·1 to 4·9 per cent., and of females from 24·1 to 11 per cent. The commissioners observe that a test of destitution which operates practically as a denial of relief cannot be regarded with satisfaction as a part of a benevolent system of poor law, and that when applied to cases of real distress must often be attended with great suffering. It is in this spirit that the commissioners have recommended extension of the principle of medical relief to sickness and in addition to the present dispensaries and workhouse infirmaries, which are in many cases too widely separated to admit of the removal of the sick to them, they propose to establish cottage hospitals, comprising at least two wards for either sex, capable of containing from five to ten beds each according to the circumstances of the district. The additional cost of such an establishment to the union would consist of the salary and maintenance of a nurse and a fair addition to the salary of the medical officer. As regards the cost of buildings, bedding, &c., the commissioners think that such auxiliaries would have a first claim on the surplus of the Irish Church fund. The commissioners point out ten districts in which hospitals of this kind are very urgently required. In the report on the Medical Charities Act, it is very satisfactory to find that the salaries of the dispensary medical officers have increased from £75,499 to £77,917, whilst the fees for vaccination have also increased by nearly £600. The commissioners continue their energetic supervision of vaccination, and they announce that, for the whole of Ireland, there was an increase of 17,145 infant vaccinations as compared with the previous year.

Nor is the Superannuation Act a dead letter. During the last year eighteen dispensary medical officers and one workhouse medical officer have retired on two-thirds of their salaries, a fact eloquent as to the estimation in which those officers were held by the guardians who voted the allowance. The commissioners conclude their report in a way which might well be imitated by the English Poor-law Board—viz., by an account of the departmental changes. They have lost two medical inspectors, whose services are duly acknowledged, and they have appointed a dispensary physician in their place. They have lost an auditor by superannuation, and they have promoted a gentleman from the rank of office-clerk. It would be refreshing to have the history of the appointments conferred at Gwydyr House made public in the same fashion.

## THE INQUEST AT THE ROYAL ORTHOPÆDIC HOSPITAL.

OF all the revelations of hospital mismanagement which have been made within recent years, that elicited by the inquest at the Royal Orthopædic Hospital in Oxford-street, on Tuesday last, is perhaps the most discreditable and disgusting. From the evidence given by the medical officers on that occasion, and which some members of the managing committee who were present failed in any way to shake by severe cross-examination, it appears that, although some six or seven deaths from diphtheria have taken place within the last few months, and diarrhœa has been epidemic in the wards of the hospital, the most reckless disregard of measures to ensure the cleanliness of the wards and the persons of the patients themselves, has been exhibited, in spite of repeated protests. The wards, according to these accounts have, by the constant cooking of food for the nurses as well as the patients, been converted into kitchens, the hearths of which have been until ten or eleven o'clock in the morning covered with pea-shells, crusts, ashes, and other refuse; the baths, which stand in the wards themselves, have comparatively rarely been used for their legitimate purpose on account of the deficiency of the water-supply, and have been converted into sinks for slops of all kinds; the personal cleanliness, or rather uncleanliness, of the children, and of such patients as could not shift for themselves, has been disgusting in the extreme; and the nursing is defective both as to quality and quantity. The case in which the house-surgeon, on entering on his duties, had to send for soap and water and himself wash a child before he could handle his limbs, and the account of his being attracted during the night by the screams of a crippled child, and finding it crawling from bed to bed in search of a utensil, which he himself had to supply after searching in vain for the required article through three wards, and having failed to engage the attention of a slumbering nurse, recall the worst phases of workhouse mismanagement.

The inquest on the victim of diphtheria appears to have been demanded by the house-surgeon himself, whose short tenure of office, extending over only four weeks, had sufficed to convince him that nothing less than public exposure could ensure anything like a radical remedy of crying evils which had become habitual and were obstinately maintained. We saw enough, on inspecting the hospital on the morrow of the inquest, to satisfy ourselves that many of his accusations are far from unfounded. The baths are situated in recesses, two feet in depth, in the walls of the wards, and are covered with boards which enable the nurses to make them store places for pots and pans, cloths and dusters, and all kinds of scullery material; the movable screen which shuts off the bath from view encloses a perfect housemaid's closet of brooms and dustpans, besides numerous children's commode chairs with the accompanying utensils, and a dirty-clothes bag. These last-mentioned details we witnessed in a ward which an official of the hospital showed with evident pride as being in apple-pie order. The little enclosure within the screen seemed to comprise a sink (the bath), a housemaid's closet,

and a scullery, with a certain amount of kitchen refuse. Another fact, which we elicited from one of the nurses, was that she is habitually in charge of four wards, three on the same floor and one on the floor above, day after day for the whole twenty-four hours, with the assistance of a second nurse during only a few hours in the day, and that these wards have usually contained a considerable number of crippled children who could not help themselves.

We trust those who are interested in this hospital, and have the power to do so, will not delay to institute a searching inquiry and make sweeping reforms.

## THE CHOLERA.

THE following are the latest particulars relating to the progress of cholera.

CHOLERA IN ST. PETERSBURG.

Statistics of the epidemic between July 19th and 25th:—

| | Cases. | Recoveries. | Deaths. |
|---|---|---|---|
| July 19th | 33 | 35 | 18 |
| 20th | 29 | 45 | 19 |
| 21st | 26 | 18 | 33 |
| 22nd | 38 | 20 | 10 |
| 23rd | 18 | 21 | 13 |
| 24th | 20 | 18 | 14 |
| 25th | 23 | 28 | 10 |

The total numbers (since the commencement of epidemic to July 26th) are as follows:—Cases 6971, recoveries 3692, and deaths 2876.

CHOLERA STATISTICS AT CRONSTADT:—

| | Cases. | Recoveries. | Deaths. |
|---|---|---|---|
| To June 24th | 33 | 9 | 18 |
| From June 24th to July 1st | 9 | 3 | 5 |
| From July 1st to 18th | 245 | 28 | 99 |
| 18th to 20th | 57 | 24 | 22 |
| 20th to 22nd | 43 | 19 | 29 |
| 22nd to 27th | 52 | 45 | 38 |
| 27th to 29th | 5 | 29 | 6 |
| 29th to Aug. 1st | 14 | 19 | 5 |
| From Aug. 1st to Aug. 5th | 19 | 31 | 14 |
| Totals | 477 | 207 | 236 |

THE CHOLERA IN PRUSSIA.

A "Lombard" telegram, dated Berlin, August 14th, states that, according to the official register, the deaths by cholera for the week ending the 11th inst., at Königsberg, numbered 44, 15 being children under eleven years of age. The persons attacked by the disease belong almost exclusively to the lower orders of society. The disease is generally attributable to want of food and of cleanliness. Hardly any of the middle or upper classes have been attacked.

A Reuter's telegram, dated Königsberg, August 15th, states that on Saturday last 40 persons were attacked there by cholera, 19 deaths occurring from the epidemic on the same day; on Sunday 38 were seized, and 16 died. The police authorities have ordered that no vessel shall be allowed to leave the port of Königsberg without having its crew medically examined. At Neufahrwassen some cases of cholera had occurred on board ship. Dantzic is still untouched. The authorities have taken the most stringent measures to prevent its being imported.

The number of persons attacked with cholera on the 14th, at Königsberg, was 62, and the deaths from that disease 22.

The news that cholera had broken out at Elbing is unfounded.

CHOLERA IN PERSIA.

Cholera has broken out at Lingah, in the Persian Gulf, and the mail steamers have not been calling there of late in consequence. Cholera also exists at Bahrein, on the Arab littoral, and in the Turkish camp at Khatif.

EVADING THE ORDER IN COUNCIL.

We are glad to know that a summons has been granted at Hull against a ship captain, because he refused to remain in the offing of the Humber until the medical inspector had boarded his ship, and had certified her free from cholera. If the authorities at all British ports take their cue from Hull, and insist upon the rigid enforcement of the powers conferred by the recent Order in Council, we may, to a very considerable extent, prevent the importation of the disease.

Several deaths from cholera are reported as having occurred on board Hartlepool vessels, but all occurred when these vessels were actually in the Baltic.

THE SOUTH-EASTERN PORTS.

Mr. Radcliffe has been deputed to visit these ports with a view to the adoption of preventive measures.

PRECAUTIONS AT CARDIFF.

The Cardiff Board of Health have resolved to put into force the power conferred on the local authorities relative to the prevention of cholera; and it is proposed to remove any cases that may arrive by way of sea to the *Hamadryad* hospital ship. We very much question the wisdom of the latter proceeding, believing it undesirable that patients affected with cholera should be introduced into a general hospital at all. We counsel the Cardiff authorities to apply to the Admiralty for the loan of another small hulk for temporary purposes.

REPORTED CASE OF CHOLERA IN LONDON.

Mr. Denman asked the Vice-President of the Council in the House of Commons on Tuesday, whether his attention had been called to a letter signed by Dr. Edmunds, and published in a newspaper that morning, stating that he had been called in to attend a typical case of Asiatic cholera.

Mr. W. E. Forster, in reply, said:—"I am informed by the medical officers of the Privy Council, that immediately on seeing this letter Dr. Buchanan was sent from the office to examine the case, and make a report. I am very glad to say, from that report, that there is reason to believe it was not a case of Asiatic cholera, although there were symptoms at first that might have excited suspicion that such was the case. The patient seems to be a respectable artisan, employed in some works, and also a school teacher, and was taken ill last night on returning from a school treat. Certainly when Dr. Edmunds was called in this morning the patient had a bad attack of cholera, and was in a state that might naturally have excited suspicion that the attack was Asiatic in its character, though there is now reason to suppose that it was not so; at any rate, the patient is now much better. I rather regret that Dr. Edmunds did not wait a few hours before writing to *The Times*, because if he had so waited I do not think he would have thought it necessary to write a letter causing needless alarm. But whether he was right or not in doing this, there is one matter to which I should wish to call the attention of medical gentlemen throughout the metropolis and the kingdom generally. Dr. Edmunds appears to have contented himself with sending this letter to *The Times* instead of communicating with the sanitary authorities of Marylebone, which, undoubtedly, it was his clear duty to do. If medical gentlemen entertain any suspicion of such cases in their own neighbourhood, they should immediately send to the sanitary authorities, whose duty it is to take all proper measures for disinfection."

# Correspondence.

"Audi alteram partem."

## ON THE LOCAL ORIGIN OF CANCEROUS AND OTHER TUMOURS.

*To the Editor of* THE LANCET.

SIR,—Professor Huxley, speaking of "xenogenesis," says: "We have the best examples of it in structures in which, under the influence of certain external conditions, elements of the body, that should have developed in due subordination to its general plan, set up for themselves, and apply to their own purposes the nourishment which they receive—e.g., in corns, warts, tumours, cancers, &c., all which are parasitic and resemble the parasite worm in everything but form." Virchow remarks that "the vessels have no direct influence in the formation of tumours"; and Mr. Campbell de Morgan, in his paper on the origin of cancer (THE

LANCET, July 29th), says: "In all cases I should regard the morbid product as the result of undirected or ill-directed growth-force, the elements of the structure, thus formed, possessing, as the natural elements do, the tendency to reproduce their like; consequently, I should consider that a special condition of blood had no more to do with the formation of a cancer than it had to do with a lipoma or an adenoid." These authorities, therefore, maintain that it is not the blood that takes the initiative, so to speak, in the formation of tumours, but that the normal elements, under local irritation or stimulus, "set up for themselves," and form peculiar growths; that, in short, *the part*, and not the blood, is the *primum mobile* in the formation of cancerous and other tumours; and it seems to me that these views are supported by many familiar facts. We all admit that in spring the development of cells in the terminal buds of trees, under the external stimuli of heat and light, precedes and determines the upward flow of the sap; that a *vis a fronte*—not a *vis a tergo*—begins and maintains growth and development. Again, nut-galls and other excrescences and nodules in and upon the trunks, branches, and leaves of trees undoubtedly have an origin purely local, and do not affect the general health of the tree, any more than corns, warts, and lipomatous tumours affect that of the human subject. In the development of the ovum, I imagine, there is a period during which it is a purely local affair, independent of blood and bloodvessels. A purely local and accidental circumstance, such as the friction of a pipe on the lip, a strain, or a blow, will often determine the formation of a cancerous growth. The same accident, we know, would not do this in all persons; this fact, however, does not show that the difference is in the blood, but only that certain persons are predisposed (whatever this may mean) to certain things. The tendency may be purely local—inherent in the tissue, as in the case of warts, and it is mere assumption to say they have their origin in a peculiar state of the blood. Then, as Mr. De Morgan has shown, persons with cancer are generally fat and well nourished until and long after some local cause has set up a cancerous growth. Their blood is clearly not the first thing amiss with them; blood-poisoning follows later on, when the condition of the tumour is such that cancer-cells make their way into the circulation, and are carried from place to place, just as foul ulcers, at first purely local, may vitiate the blood and poison the system. I had a case, this year, in which the cancer seemed to be set up by a strain upon the left chest and shoulder. The man had always been remarkably robust, well-nourished, and fresh-coloured, a "first-class life," as we should say, for insurance, up to the time of the strain, and for some time afterwards; so that, but for the strain, he might have lived to seventy-five or eighty, instead of sixty-two. After that he complained of stiffness or pain in the shoulder, pain in the left upper ribs in front, which were so tender that he could not bear percussion after the second visit. There were dulness of the upper third of the lung in front and behind, slight expectoration of blood-stained mucus, and a scirrhous nodule on the sternum. He complained of those spinal, pelvic, and sciatic pains described by Mr. De Morgan, and latterly he had paralysis of bladder and rectum. Unfortunately no post-mortem was allowed, but there is little doubt this man had cancer of the lung, and probably there was cancer of the ribs and vertebræ also. He was the type of a healthy man up to the time of the accident, which (and not the state of the blood) evidently gave rise to the cancerous growths.

I am, Sir, your obedient servant,

D. HOOPER, B.A. & M.B.

Trinity-square, S.E., August 5th, 1871.

## BURKE'S REFLECTING OPHTHALMOSCOPE.

*To the Editor of* THE LANCET.

SIR,—Your Edinburgh correspondent, in the mention he was good enough to make of an ophthalmoscopic demonstration that, by the assistance of Dr. Argyll Robertson and Mr. Walker, I was enabled to give at the Eye Dispensary in that city, has accidentally omitted the name of the inventor of the very beautiful instrument which it was my object to display, and for which, in its present state of perfection, we are indebted to Dr. Burke, formerly *chef de clinique* to Dr. de Wecker of Paris. An ophthalmoscope on the same principle was contrived, some years ago, by Klaunig; but Dr. Burke, by increasing the size and the focal length of the mirrors, has obtained a brilliancy of illumination and a degree of enlargement which have never before been approached. Perhaps I may add, for the information of any members of the profession who may desire to see the instrument, that it is in use at St. George's Hospital, in the out-patient department, every Saturday afternoon at about 3 o'clock.

I am, Sir, your obedient servant,

Wimpole-street, August 14th. R. BRUDENELL CARTER.

## SEQUELÆ OF SMALL-POX.

*To the Editor of* THE LANCET.

SIR,—In compliance with a request in the issue of THE LANCET of July 22nd, I beg to forward you the subjoined table of sequelæ of small-pox as observed by myself in the Small-pox and Fever Hospitals, Newcastle-on-Tyne.

I am, Sir, your obedient servant,

H. E. ARMSTRONG,
Medical Officer to the Newcastle-on-Tyne Small-pox and Fever Hospitals.

July 25th, 1871.

*Sequelæ observed in* 382* *Cases of Small-pox admitted to the Newcastle-on-Tyne Small-pox and Fever Hospitals from March 1st to July 24th, including* 45 *Patients still under treatment.*

| | Not Vaccinated. | | Vaccinated. | |
|---|---|---|---|---|
| | No. of cases not fatal. | No. of fatal cases. | No. of cases not fatal. | No. of fatal cases. |
| Boils | 7 | ... | 4 | — |
| Abscesses | 2 | ... | 1 | — |
| Ophthalmia (general) | 2 | ... | 2 | — |
| Ditto, with total destruction of eyeball | 1 | ... | ... | — |
| Ditto, with loss of sight | 2 | ... | ... | — |
| Conjunctivitis | 3 | ... | 2 | — |
| Sclerotitis | ... | ... | 1 | — |
| Corneitis | 1 | ... | 2 | — |
| Bronchitis | 1 | 2 | 1 | 2 |
| Pneumonia | ... | 1 | ... | — |
| Convulsions | ... | 2 | ... | 1 |
| Erysipelas | ... | 1 | ... | — |
| Erythema (paratrimma) | 1 | ... | ... | — |
| Diarrhœa | ... | 1 | 1 | — |
| Abortion | ... | 1 | 2 | — |
| Rheumatoid arthritis | ... | ... | 1 | — |
| Epistaxis | 1 | ... | 2 | — |
| Stiffneck | ... | ... | 1 | — |
| Papillary hypertrophy of nasal integument† | ... | ... | 1 | — |
| Total | 21 | 8 | 21 | 3 |

* Of these, 238 were vaccinated, and 144 unvaccinated.
† After falling of crusts, a great disfigurement.

Sequelæ not fatal in the unvaccinated in nearly 14 per cent. of cases treated; in the vaccinated in nearly 9 per cent.
Sequelæ fatal in the unvaccinated in 5½ per cent. of cases treated; in the vaccinated in 1½ per cent.

## INQUEST FEES.

*To the Editor of* THE LANCET.

SIR,—Can you inform me how it is that I, in common with all surgeons in the East of London (at least I believe so), have to wait several months before our inquest fees are paid. We are called peremptorily to give evidence at inquests, however inconvenient, and often at a sacrifice, and though invited before we leave to sign a receipt, we are kept waiting as above. If this delay rests with the coroner, can any pressure be put upon him for payment directly the inquest is over (as Mr. Payne does in the city)?

if with the beadles, I think the coroner very lax in allowing them the option of paying our fees when they like. If a beadle died suddenly the coroner would find himself indebted to us to a large amount for fees. Perhaps your kindly inserting this may lead to a remedy.

I am, Sir, your obedient servant,

ONE WHO WANTS HIS FEES.

## IRELAND.

(FROM OUR OWN CORRESPONDENT.)

### THE IRISH AMBULANCE CORPS.

COUNT DE FLAVIGNY, the President of the Society for Succour to the Sick and Wounded, accompanied by the Bishop of Orleans, the Duc de Feltre, &c., is expected to arrive to-morrow evening in Kingstown harbour, where he will be received by the Town Commissioners of Kingstown, and presented with an address by the Lord Mayor and Corporation of Dublin. The French deputation have been sent over with the sanction and authority of the French nation, charged to express their thanks to Ireland for her sympathy and assistance during the late disastrous war. Bronze medals, it is understood, will be distributed by Count de Flavigny to those who were members of the Irish Ambulance Corps during the late contest.

### TRAINING SHIP FOR BELFAST LOUGH.

A meeting was held last week in the Commercial Buildings, Belfast, to consider the question of a training ship to be stationed in the Lough, as an industrial school for houseless and indigent boys in Belfast. I understand £3000 in donations and annual subscriptions to the amount of £300 have been promised, so that shortly an institution will be established which will be of incalculable service in rescuing from crime and misery many boys left unprotected by the death or desertion of their parents.

### FOOT AND MOUTH DISEASE.

I regret to state that this disease has made its appearance during the last few days in different parts of Meath, the principal grazing county of Ireland. In the vicinity of Belrath, it is said that from forty to fifty head of cattle belonging to one owner have succumbed within the last few days to the disease. In the neighbourhood of Navan, also, graziers and farmers have lost a good many animals. In Kells the losses have been serious, and in the county of Dublin the number of cattle attacked with this affection has caused a great scarcity of milk among the dairy proprietors.

### CHOLERA—QUARANTINE.

The Poor-law Commissioners in Ireland have issued a circular to each union throughout Ireland, calling the attention of the guardians to the apprehended approach of cholera to the shores of this country, and containing regulations on the subject of quarantine, which entail specific duties on every nuisance authority within whose jurisdiction any ship shall arrive having on board any person affected by this disease.

Dublin, 15th August, 1871.

# Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the last meeting of the Council, the following gentleman (admitted a Member on the 5th of March, 1841) was elected a Fellow of the College:—

Stedman, John Buck, Godalming.

Mr. Charles Hawkins gave notice of the following motion for the next ordinary meeting of the Council—viz.: "To take into consideration the question of placing those gentlemen who pass the examination for the Fellowship in classes according to merit.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent first M.B. examination:—

FIRST DIVISION.—Henry Seymour Bramfoot, Arthur Buchanan, and Geo. Francis Kirby Smith, Guy's; Henry Colgate, Charles Alfred Rayne, Edward Albert Schafer, and Edward Markham Skerritt (B.A.), University College; Andrew Dodson, Queen's College, Birmingham; Charles Firth, St. Bartholomew's.

SECOND DIVISION.—Boughton Addy, St. Thomas's; John Appleyard, Samuel Hahnemann Blake, William Dyson (B.A.), Chas. Wm. Harvey, and Thomas Sharpe Parry, University College; Henry Ashby and Edgar Reginald Legassicke Crespin, Guy's; Edward Cromwell Baber, St. George's; Hugh Walter Boddy and Edward Kennedy (B.A.), Manchester School; George Wilson Burn, St. Bartholomew's; David Neilson Knox (M.A. Glasg.), University of Glasgow; David Bridge Lees, University of Cambridge; John Lewtas, Liverpool School; William Allen Sturge, Bristol School and University College.

EXCLUDING PHYSIOLOGY.

SECOND DIVISION.—George Albert Dundas, Guy's; Richard Hickman, St. Mary's; Arthur Nicholson, King's College.

PHYSIOLOGY ONLY.

FIRST DIVISION.—Arthur Mudge Bramfoot, Guy's.

SECOND DIVISION.—David Arthur Davies, University College; Herbert Campbell Moss, King's College; Edmund Blacket Owen, St. Mary's; William Summerhayes, St. Thomas's; John (B) Taylor and William Williams, Guy's.

H.M. BRITISH MEDICAL SERVICE.—The following is a list of candidates who were successful at the competitive examinations held at London in February and at Netley in August, 1871, after having passed through a course at the Army Medical School, Netley:—

| | No. of Marks. |
|---|---|
| Crombie, A., Edinburgh | 6965 |
| Stuart, G. B., Melbourne and Edinburgh | 6775 |
| Irving, L. A., Dublin | 5335 |
| M'Cracken, J. A., Belfast | 5330 |
| Beamish, J. M., Cork | 5150 |
| Clery, J. A., Dublin | 5000 |
| Cruikshank, B., Aberdeen | 5040 |
| Coats, J., Glasgow | 5005 |
| Williamson, J. G., London | 4940 |
| Bradford, H., London | 4630 |
| Fawcett, W. J., Dublin | 4481 |
| Joynt, H. W., Dublin | 4475 |
| Saunders, W. E., London | 4470 |
| Leckie, D., Glasgow | 4442 |
| Charlton, W. J., Dublin | 4310 |
| Ruxton, J., Aberdeen | 4240 |
| Anthonisz, A. H., Aberdeen | 4185 |
| Tobin, W., Dublin | 4170 |
| Molloy, O., Belfast | 4145 |
| Moylan, W. J., Dublin | 4120 |
| Exham, R., Cork | 4026 |
| White, W. L., Edinburgh and Aberdeen | 4018 |
| M'Namara, J., Cork | 4013 |
| Harman, R., Dublin | 3980 |
| Wilson, J. B., Sheffield, Edinburgh, and Galway | 3960 |
| Leake, G. D. N., London | 3812 |
| Martin, J. W., Dublin | 3812 |
| Robinson, R. H., Dublin | 3682 |
| Gabbett, P. R. D., Montreal and London | 3677 |
| O'Connell, M. D., Cork | 3636 |
| Palmer, C. de M., Dublin | 3566 |
| Ward, E. C. R., Dublin | 3558 |
| Finlay, W., Dublin | 3537 |
| Sullivan, W. P., Dublin | 3513 |
| Joynt, E. H., Galway | 3498 |
| Dickson, J. R., Kingston, Montreal, and London | 3490 |

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 10th:—

Garton, William, St. Helens, Lancashire.
Pearce, Joseph Chasing, Manor House, Brixton.
Wheeler, Daniel Martin Brunwell, Chelmsford, Essex.

On the same day the following gentlemen passed their first professional examination:—

William Charles Hansell, Andrew Emerson Kessen, Frank Thomas Paul, and Sidney Walter Spark, Guy's; George Herbert Le Mottée, King's College; William Tickle Whitmore, St. Bartholomew's.

UNIVERSITY OF ABERDEEN.—During the past year the following candidates, after the usual examination, received degrees in Medicine and Surgery:—

DEGREE OF M.D.

Dutt, Russick Laul, M.R.C.S.E., L.S.A., Calcutta.
Ghose, Krisno Dhan, M.R.C.S.E., L.M.S.C., Calcutta.
Matthews, Josiah Wright, L.F.P. & S. Glas., L.S.A., Port Natal.

At the same time the following received promotion to the degree of M.D.:—

Arbuckle, Hugh Wight, M.B., Thorne, Doncaster.
Brown, Charles Robert, M.B., C.M., Beckenham, Kent.
Coleman, Matthew Owen, M.R.C.S., M.B., Surbiton, Surrey.
Coutts, James Allen, M.B., C.M., Bunchory-Ternan.
Crowther, Edw. Lodewyk, M.B., C.M., Alford, Lincolnshire.
Cullen, James, M.B., C.M., Chumpa-run, Bengal.
Dyer, Thos. Birch, M.B., C.M., Bethlem Royal Hospital, London.
Hocken, Charles Edward, M.B., Wood-green, Middlesex.
Keith, Joseph Forbes, M.B., C.M., Aberdeen.
Nicol, Patrick, M.D., C.M., Bradford.
Simpson, George Alex., M.B., C.M., London.
Wood, Alexander, M.B., C.M., Edwardesabad, Bengal.
Woodford, Edw. Russell, M.B., C.M., Ventnor, Isle of Wight.

DEGREE OF M.B.

Benham, William Thomas, Bristol.
Bovill, Edward, M.R.C.S. Eng., Lond.
Brotchie, Theodore Rainy, Aberdeen.
Carless, Edward Nicolls, Devizes.
Carmichael, Archibald, M.A., Maryculter.
Chiappini, Peter Alexander, Cape of Good Hope.
Cobban, Alexander Richard, Whitfield, Berkeley.
Creighton, Charles, M.A., Peterhead.
Crombie, Charles Mann, Aberdeen.
Davidson, Charles, Aberdeen.
Davidson, George Farquhar, Aberdeen.
Edwards, William Henry, M.R.C.S.E., Antigua.
Edwardes, Lewis, M.R.C.S. Eng., Wimbledon.
Fasken, William Andrew Durnford, M.R.C.S. Eng., London.
Goodhart, James Frederic, L.R.C.P. Lond., M.R.C.S., Brighton.
Gordon, John, Gray's Hospital, Elgin.
Hay, Frederick, Hull.
Jotham, George William, Kidderminster.
Knaggs, Samuel Thomas, L.K.Q.C.P.I., L.R.C.S.I., Newcastle, New South Wales.
Lawrence, Nathaniel, Longside.
Lowson, David, Aberdeen.
Maclean, John Cassilis Birkmyre, M.A., Kiltearn, Ross-shire.
M'Calman, Hugh, Caithness.
Marshall, Lewis Walter, M.R.C.S. Eng., Bristol.
Milne, Thomas, M.A., Elion.
Raitt, Thomas, Aberdeen.
Shepherd, James, M.A., Aberdeen.
Simpson, James, Aberdeen.
Waldo, Henry, Clifton.
Walsham, William Johnson, L.S.A., London.
Wharry, Charles John, M.R.C.S. Eng., L.S.A., Woolwich.
Williams, Alfred Henry, London.
Wilson, Alexander, M.A., Rayne.

DEGREE OF C.M.

Benham, William Thomas.
Bovill, Edward.
Brotchie, Theodore Rainy.
Carless, Edward N.
Carmichael, Archibald.
Chiappini, Peter Alexander.
Cobban, Alexander Richard.
Creighton, Charles.
Crombie, Charles Mann.
Davidson, Charles.
Davidson, George Farquhar.
Edwards, William Henry.
Fraser, George Innes.
Goodhart, James Frederic.
Gordon, John.
Hay, Frederic.
Jotham, George William.
Knaggs, Samuel Thomas.
Lawrence, Nathaniel.
Lowson, David.
Maclean, John Cassilis Birkmyre.
M'Calman, Hugh.
Marshall, Lewis Walter.
Matthews, Josiah W.
Milne, Thomas.
Raitt, Thomas.
Shepherd, James.
Simpson, James.
Waldo, Henry.
Walsham, William Johnson.
Wharry, Charles John.
Williams, Alfred Henry.
Wilson, Alexander.

COLLEGE OF PHYSICIANS, IRELAND. — At examinations held on the 8th, 9th, and 10th of August, the following gentlemen obtained the licences in Medicine and Midwifery:—

MEDICINE.—Henry Carpenter, Alexander Flood, James Armstrong Hanrahan, Robert Gumbleton Lamb, Francis Reginald Malcolm Loftie, Henry William Patterson, George Lombe St. George, William Sandham Symes.

MIDWIFERY. — Henry Carpenter, Alexander Flood, James Armstrong Hanrahan, George Lombe St. George, William Sandham Symes.

DR. FISHER, of Lytham, Lancashire, and Mr. James Dearden, of Great Harwood, have received the Government grant for efficient vaccination.

DR. LEDWITH, of the Kingstown Dispensary District, after a long and arduous service, has, on his resignation, obtained two-thirds of his late salary as a superannuation allowance.

As Mr. Ralph Montague Bernard, the senior surgeon of the Bristol Royal Infirmary, was walking with his wife along the cliffs at Gwbert, in the Bay of Cardigan, on Thursday week, the edge gave way, and he fell on to the beach seventy feet below. He sustained a severe fracture of the skull, and died in a few minutes.

## Medical Appointments.

APPLIN, Mr. G. P., has been appointed Medical Officer for the Hoo Union, Kent, vice F. T. Wright, M.R.C.S.E., resigned.

BLAND, W. C., M.R.C.S.E., has been appointed an Assistant Medical Officer at the Hampstead Small-pox Hospital.

BOOTH, E. J. H., M.R.C.S.E., has been appointed Medical Officer for the Mirfield District of the Dewsbury Union, vice Thos. Wade, M.R.C.S.E., resigned.

CROSSKEY, W. F., M.D., has been appointed Medical Officer for the Lower District, the new Workhouse, and the St. Ann's Workhouse for Children, vice R. Turner, M.R.C.S.E., resigned.

EVANS, G. H., M.D., has been appointed Resident Assistant-Physician at St. Thomas's Hospital.

GARRINGTON, A. M., M.D., M.R.C.S.E., has been appointed Surgeon to Portsmouth Gaol.

GIBSON, C. H., L.R.C.P.Ed., L.R.C.S.Ed., M.R.C.S.E., has been appointed Assistant Medical Officer for the Idiot Branch of the Warwick County Lunatic Asylum.

GRAY, A. R., M.D., M.R.C.S.E., has been appointed Assistant Medical Officer at the Broadmoor Criminal Lunatic Asylum.

HERMAN, G. E., M.R.C.S.E., has been appointed an Assistant Medical Officer at the Hampstead Small-pox Hospital.

LAW, W. T., M.R.C.S.E., has been appointed Resident Physician to the Royal Infirmary, Edinburgh.

LAWRIE, E., M.B., M.R.C.S.E., has been appointed Resident Medical Officer at the General Hospital and Dispensary for Sick Children, Manchester, vice J. Moffat, M.D., L.R.C.S.Ed., resigned.

LOWNE, B. T., M.R.C.S.E., has been appointed Lecturer on Physiology at the Middlesex Hospital Medical College.

MACGREGOR, D., M.B., C.M., has been appointed Medical Attendant to the Loyal Earl of Lonsdale Lodge of Odd Fellows, Bampton, Cumberland, vice T. Blades, L.R.C.P.Ed., L.F.P. & S. Glas., deceased.

MOORE, Dr. E., has been appointed Honorary Medical Officer to the Preston and County of Lancaster Royal Infirmary, vice Dr. Malling, deceased.

NEWTON, R. C., M.R.C.S.E., has been appointed Visiting Surgeon for the Out-patient Department of the Newcastle-on-Tyne Lying-in Hospital.

NORTH, J. C., M.B., C.M., has been appointed House-Surgeon to the Brecknock Infirmary, vice J. T. Jones, M.B., M.R.C.S.E., promoted to Physician.

PARTRIDGE, J. H., M.R.C.S.E., has been re-elected a Surgeon to the Essex and Colchester Hospital, on the expiration of his term of office under the rules.

PRITCHARD, J. C., L.R.C.P.Ed., has been appointed Medical Officer for the Nettlebed District of the Henley Union.

ROE, J. R., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer for District No. 4 of the Bridgnorth Union, vice W. Thursfield, jun., M.D., resigned.

ROUSE, J., F.R.C.S.E., has been appointed Hon. Consulting Surgeon to the Royal Asylum of St. Anne's Society.

SHERRY, J., L.R.C.S.I., has been appointed Junior Assistant Medical Officer to the Ebbw-vale Iron Works, Monmouthshire, vice Wm. H. Boland, L.R.C.S.I., appointed Senior.

SMITH, W. R., L.R.C.P.Ed., L.R.C.S.Ed., late Assistant House-Surgeon, has been appointed House-Surgeon to the Huddersfield Infirmary, vice Booth, resigned.

WALKER, S., M.R.C.S.E., has been appointed a Surgeon to the North Riding Infirmary, Middlesbro'-on-Tees, vice J. Ellerton, M.D., resigned.

WHITEHEAD, A., M.R.C.S.E., has been appointed Resident Medical Officer at the Birmingham and Midland Free Hospital for Sick Children, vice A. S. Underhill, M.B., C.M., resigned.

WILSON, H. O., M.R.C.S.E., has been appointed an Hon. Medical Officer to the Wirral Hospital and Dispensary for Sick Children, Birkenhead, vice Dr. W. Forbes, resigned.

WRIGHT, Mr. F. W., has been appointed fourth Assistant Resident Medical Officer at the General Infirmary, Leeds.

YOUNG, W. W., M.B., C.M., has been appointed Medical Officer for the Aldershot District of the Farnham Union, vice E. J. Barker, M.D., M.R.C.S.E., resigned.

[In our last issue it was stated that "Dr. Cayley has been appointed Physician to the London Fever Hospital, vice Dr. Harley, resigned." This statement should have been that Dr. Cayley has been appointed Assistant-Physician, vice Dr. Thorne, who resigned some time since. Dr. Harley is still Physician of the London Fever Hospital. In the same number the new House-Physician of the Seamen's Hospital was wrongly described. It should have been "Daphtary, G. R., M.D., M.R.C.S.E., L.M. Bombay," &c.]

## Births, Marriages, and Deaths.

### BIRTHS.

AVELING.—On the 11th inst., at Homerton, the wife of Charles T. Aveling, M.B., F.R.C.S.E., of a daughter.

EVANS.—On the 10th inst., the wife of N. Evans, M.D., of Cheshunt, of a son.

FAGGE.—On the 10th inst., at Lutterworth, the wife of Herbert W. Fagge, Surgeon, of a son.

GOODWORTH.—On the 10th ult., at Ivy Cottage, Winterton, Brigg, the wife of Roger Portington Goodworth, L.R.C.P.Ed., M.R.C.S.E., of a daughter.

HOCKEN.—On the 8th inst., at Wood-green, Middlesex, the wife of Dr. C. E. Hocken, of a daughter.

M'INTYRE.—On the 7th inst., at Horse-grove House, Rotherfield, Tunbridge Wells, the wife of John M'Intyre, M.D., of a daughter.

### MARRIAGES.

ARGLES—LENDON.—On the 12th inst., at the Church of St. Mary Magdalen, Hastings, Robert Argles, Surgeon, of Radnor-place, Gloucester-square, W., to Rose Eleanor, elder daughter of Edwin Lendon, Esq., of Maidstone.

MASKELYNE—TUCKEY.—On the 10th inst., at Bishopstone, Wilts, George Henry Maskelyne, Esq., of Faringdon, Berks, to Mary, youngest daughter of the late Richard Tuckey, Esq., of Hayden, Wilts.—No Cards.

MATURIN—DRUMMOND.—On the 20th ult., at the Parish Church, South Stoneham, Hants, J. Maturin, Esq., Army Medical Staff, to Adeline, daughter of Col. Drummond, late 10th Hussars, of Portswood, Hants.

### DEATHS.

A'BECKETT.—On the 23rd of May, at Sydney, New South Wales, Arthur M. A'Beckett, aged 58.

BERNARD.—On the 10th inst., Ralph M. Bernard, F.R.C.S.E., of Clifton, Bristol.

KENDALL.—On the 15th inst., at King's Lynn, Thos. M. Kendall, F.R.C.S., L.S.A., aged 51. No Cards. Friends will please accept this intimation.

NEWBOLD.—On the 7th inst., Ambrose Newbold, L.K.Q.C.P.I., M.R.C.S.E., of Carnew, Co. Wicklow, aged 44.

SYMOT.—On the 9th inst., at Lisnascia, Co. Down, Robert Symot, M.D., late of Royal-avenue, King's-road, Chelsea, aged 82.

THOMAS.—On the 1st of June, Dr. David John Thomas, of Melbourne, Victoria.

## MR. SIMON ON CHOLERA.

THE Medical Department of the Privy Council has, in view of the prevalence of cholera on the Continent, and by direction of the Lords of the Council, followed up the recent orders on the subject by a memorandum as to the precautions which it is necessary to take against the infection of cholera. This memorandum demands the attention of all sanitary bodies. The following are Mr. Simon's chief comments and recommendations:—

Happily for mankind, cholera is so little contagious, in the sense in which small-pox and scarlatina are commonly called contagious, that, if reasonable care be taken where it is present, there is scarcely any risk that the disease will spread to persons who nurse and otherwise closely attend upon the sick. But cholera has a certain peculiar infectiveness of its own, which, *where local conditions assist*, can operate with terrible force, and at considerable distances from the sick. It is characteristic of cholera, not only of the disease in its developed and alarming form, but equally of the slightest diarrhœa which the epidemic influence can cause, that all matters which the patient discharges from his stomach and bowels are infective, and that, if they be left without disinfection after they are discharged, their infectiveness during some days gradually grows stronger and stronger. Probably, under ordinary circumstances, the patient has no power of infecting other persons except by means of these discharges; nor any power of infecting even by them, except in so far as particles of them are enabled to taint the food, water, or air, which people consume. Thus, when a case of cholera is imported into any place, the disease is not likely to spread unless in proportion as it finds, locally open to it, certain facilities for spreading by *indirect infection*. In order rightly to appreciate what these facilities must be, the following considerations have to be borne in mind:—First, that any choleraic discharge cast without previous thorough disinfection into any cesspool or drain, or other depository or conduit of filth, infects the excremental matters with which it there mingles, and probably to some extent the effluvia which those matters evolve; secondly, that the infective power of choleraic discharges attaches to whatever bedding, clothing, towels and like things, have been imbued with them, and renders these things, if not thoroughly disinfected, as capable of spreading the disease in places to which they are sent (for washing or other purposes) as, in like circumstances, the cholera patient himself would be; thirdly, that if, by leakage or soakage from cesspools or drains, or through reckless casting out of slops and wash-water, any taint (however small) of the infective material gets access to wells or other sources of drinking-water, it imparts to enormous volumes of water the power of propagating the disease. When due regard is had to these possibilities of indirect infection, there will be no difficulty in understanding that even a single case of cholera, perhaps of the slightest degree, and perhaps quite unsuspected in its neighbourhood, may, *if local circumstances co-operate*, exert a terribly infective power on considerable masses of population.

*The main object for endeavour must be to secure such local circumstances that cholera-contagium, though not disinfected, shall be unable to act extensively on the population.*

The dangers which have to be guarded against as favouring the spread of cholera-contagium are particularly two. First, and above all, there is the danger of *water-supplies* which are in any (even the slightest) degree tainted by house-refuse or other like kinds of filth; and secondly, there is the danger of breathing *air* which is foul with effluvia from the same sorts of impurity. Temporary security must, as far as practicable, be sought in measures of a palliative kind. (*a*) Immediate and searching examination of sources of water-supply should be made in all cases where the source is in any degree open to the suspicion of impurity, and the water both from private and public sources should be examined. Where pollution is discovered, everything practicable should be done to prevent the pollution from continuing, or, if this object cannot be attained, to prevent the water from being drunk. (*b*) Simultaneously, there should be immediate thorough removal of every sort of house-refuse and other filth which has accumulated in neglected places; future accumulations of the same sort should be prevented; attention should be given to all defects of house-drains and sinks through which offensive smells are let into houses; thorough washing and lime-washing of unclean premises, especially of such as are densely occupied, should be practised again and again. (*c*) Disinfection should be very freely and very frequently employed in and around about houses, wherever there are receptacles or conduits of filth, wherever there is filth-sodden porous earth, wherever anything else, in or under or about the house, tends to make the atmosphere foul. In the absence of permanent safeguards, no approach to security can be got without incessant cleanings and disinfections, or without extreme and constant vigilance against every possible contamination of drinking water.

In view of any possibility that the infection of cholera may again be present in this country, it is desirable that in each locality the public should ascertain to whom it practically has to look, in case of need, for its collective safety against such dangers as the above. The responsibility is, in a large proportion of cases, mixed. The most critical of all its branches, the responsibility of providing for the unpolluted ness of water-supplies, is, in many very important places, in the hands of commercial companies; and it is to be hoped that these companies, informed as they must be of the calamitous influence which some of their number have exerted in previous epidemics of cholera, will remember, if the disease should again be present here, that each of them, in its daily distribution of water, has hundreds, or even thousands, of human lives in its hands. But, except to that extent, the responsibility for local defences against cholera, both as regards water-supply and as regards local cleanliness and refuse-removal, is vested in the local authorities: the "sewer authorities" and "nuisance authorities" of recent statutes. These authorities—the town councils, improvement commissioners, local district boards, boards of guardians, and select and common vestries, of their respective areas of jurisdiction—are all either electively or directly so constituted as to represent the will of the local rate-paying population, and each such population has had almost absolute means of deciding for itself whether the district which it inhabits shall be wholesomely or unwholesomely kept. It is greatly to be wished that the former of these alternatives had, from long ago, been the desire of every local constituency in the country. It may fairly be believed that, in considerable parts of the country, conditions favourable to the spread of cholera are far less abundant than at former times of visitation; but it is certain that in very many places the conditions of security are wholly or almost wholly absent; and it is to be hoped that, in all this large class of cases, the authorities, under present circumstances, will do everything which, in the remaining time, can be done, to justify the trust reposed in them by the Legislature for the protection of the public health.

Medical Department of the Privy Council Office,
August 10th, 1871.

## Medical Diary of the Week.

### Monday, Aug. 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

### Tuesday, Aug. 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.

### Wednesday, Aug. 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL.—Operations, 3 P.M.
WEST LONDON HOSPITAL.—Expected Operations, 3 P.M. Lithotrity, by MR. TEEVAN.

### Thursday, Aug. 24.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.

### Friday, Aug. 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

### Saturday, Aug. 26.

ST. THOMAS'S HOSPITAL.—Operations, 9½ A.M.
HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

## Notes, Short Comments, and Answers to Correspondents.

### RECRUITING.

THE new regulations regarding recruiting have been promulgated, by which it will be seen that a kind of compromise has been effected, and that the Government has been compelled to have recourse to some expedients to meet the difficulties that must otherwise have arisen from sending regiments mainly composed of very young men to India and the colonies. Enlistments for the Foot Guards and infantry are to be short service enlistments—that is, six years for the regular army, and six for the reserve. The age of recruits for all branches of the service at home is to be from eighteen to twenty-five years, but drivers for the Royal Artillery are not to be taken under nineteen. No recruits under twenty years of age are to be taken for regiments serving at or immediately proceeding to foreign stations, and none under nineteen when they are not expected to serve over twelve months before embarkation. This strikes us as a kind of tinkering; but it serves to meet the case. Like most rules, however, when difficulties arise, it will, we suspect, be more honoured in the breach than in the observance. We hope care will be taken that recruits and young soldiers, whilst learning their drill in this country, are not overworked and overweighted. An increase in the amount of the meat ration and an almost entire exemption from night duties are required to develop recruits into soldiers of the right stamp.

*Finder.*—We do not prescribe in the columns of this journal.

### DISEASES OF THE ABSORBENT SYSTEM IN WARM CLIMATES.

WE notice in the Parliamentary Reports of Her Majesty's colonial possessions that diseases of the absorbent system caused five deaths at the Mauritius in 1869, which were described as "disease of the glands." Affections of these parts, especially of the inguinal glands, in young persons, appear to be rather common in the Mauritius, and the subject is said to have lately attracted the attention of an eminent English physician. We happen to know from experience that diseases of the lymphatic glands, and of the groin especially, are also common in several other warm enervating climates, as the Mediterranean stations, for example. One or more glands slowly enlarge from a very indolent form of inflammation, and remain sometimes for several months in the same state, or occasionally they suppurate. The local disease is almost always connected with, if not preceded by, manifestations of depressed health, loss of spirits and appetite, and anæmia. These cases, when they occur in young children, are very difficult of cure; indeed in some cases it is only by a change of climate, or, what is allied to this, the occurrence of winter with its diminished temperature, that recovery takes place. The affection may arise in any variety of constitution, and those in whom it appears would not be considered of the strumous habit, although such are undoubtedly more liable to glandular affections. Persons of the lymphatic temperament more especially show a proclivity to this kind of glandular disease. There is almost always some attendant disorder of the assimilative organs, and this probably lessens the amount of good that might be expected from the administration of tonics, iodide of iron, quinine, cod-liver oil, &c.

*A Victim* should believe nothing that quacks tell him, but consult some respectable practitioner. If so poor as he says, he should apply to a surgeon at some general hospital.

*Inquirer.*—Dr. Carpenter is to be the President for the ensuing year.

### POTT'S FRACTURE.

*To the Editor of* THE LANCET.

SIR,—I have read a very interesting letter on the above subject from the pen of Mr. Frederick Ensor in your journal of this date; and as he advocates primary amputation in compound dislocation of the ankle joint, I beg to give him three cases of such accidents, in two of which the patients escaped with stiff joints, and were afterwards able to move about. The following is a brief sketch of the cases.

1. Pott's fracture occurred to a labourer in Pembroke Dockyard. There was much difficulty in reducing the dislocation and keeping it in position before sending him on board the hospital ship. The pressure of the splint over the internal malleolus caused sloughing; nevertheless, the wound healed, and he recovered with a stiff joint; but there was great deformity of the foot, which became displaced after the removal of the splint, which could not be used on account of the sloughing. Some months after the accident he appeared to walk on the inner edge of the foot. To correct this awkwardness, he was obliged to wear a thick-soled boot, which looked clumsy, and hardly answered the purpose.

Any pressure in these cases is badly borne, and sure to cause sloughing of the thin integumentary covering of the tibia.

2. This case of Pott's fracture was more fortunate, and is a good example of conservative surgery. This accident happened also in Pembroke Dockyard. The fibula gave way in the usual place; the foot was dislocated, and the tibia protruded, the joint at the internal malleolus being quite exposed, synovia escaping. The man was removed at once on board H.M.S. *Nankin*, and came under the care of Staff Surgeon Pickthorne. The man made an admirable recovery under the simplest treatment, and with a whole limb!

3. A case of comminuted fracture of both bones has been lately under my care in the hospital here. The foot, which was dislocated outwards, was easily brought into position. The case was treated by junks and cold lotion, the skin not being quite broken, though very nearly so. Owing to insomnia and delirium, splints had to be applied, at first the ordinary wooden ones, afterwards M'Intyre's; but, as I anticipated, sloughing obliged me to remove the pressure. Erysipelas setting in, and the joint being exposed, I amputated below the knee on the 14th July. He died, however, on the 27th ult., tetanus supervening ten days after the leg was removed.

I doubt whether primary amputation in this case would have had a better result, as the patient was sixty years of age, and one of those "hard livers" of whom Mr. Ensor speaks in his very interesting communication from South Africa.

Yours truly,

J. D. CRONIN, M.D., F.R.C.S.,
Staff Surgeon, R.N., Retired List.

Queenstown, Aug. 12th, 1871.

### HOW TO PREVENT RUST.

*A Country Surgeon* is anxious to ascertain what is the best method of keeping surgical instruments free from rust, as he has tried various applications without effect.

*M.R.C.S.*—Our correspondent will observe in another portion of the Journal a notice of the subject to which he refers.

*Dolores.*—We think that the fees should be equally divided.

### ON THE CILIATED CONDITION OF THE BLASTODERM OF THE CHICK.

*To the Editor of* THE LANCET.

SIR,—In your report of the meeting of the British Association, you make it appear that Drs. Sharpey and Carpenter thought I was probably too hasty in publishing my opinion. In truth, I myself suggested that more observations were wanting, and that I only wished to record what appeared to all a most interesting series of observations. Drs. Sharpey and Carpenter completely concurred in all I stated.—Yours, &c.,

BENJN. T. LOWNE,
Lecturer on Physiology at the Middlesex Hospital Medical School.

Guildford-street, August 12th, 1871.

### ON THE TREATMENT OF CHOLERA.

*To the Editor of* THE LANCET.

SIR,—As the approaching epidemic of cholera may shortly be expected to visit our shores, it may be useful to direct attention to a remedy which has, practically, been found useful, and which, theoretically, seems to be deserving of notice. I allude to the internal administration of the dilute phosphoric acid in half-drachm doses, combined with syrup of orange, and largely diluted with iced water. In cases of choleraic diarrhœa and in the early stage of confirmed cholera, this remedy appears to be capable of checking the progress of the disease with greater certainty than sulphuric acid, and it is probable that a more extended trial of it will confirm the favourable opinion which I entertain of its value in this disease. It would be unreasonable to expect that in the stage of advanced collapse either phosphoric acid or any other pharmacopœial remedy which has been proposed should exert any beneficial influence over the disease until reaction has set in, and there is at present no evidence to justify the assumption that this can be effected better by one remedy than by another. It is well known that a large proportion of the mortality in the last three epidemics of cholera has been due to an excess of this necessary reaction, and that such excess has not only been very noticeable, but also very fatal, in those cases in which the so-called eliminative treatment has been pursued, showing that increased irritation of the gastro-intestinal mucous membrane has contributed to intensify the disease. In a former communication, "On the Mortality from Reaction in Cholera" (THE LANCET, Nov. 24th, 1866, p. 597), I had occasion to direct attention to the unfavourable statistics of the castor-oil treatment of cholera at King's College Hospital in 1866; and it is a very suggestive fact that, up to the present time, no statistical evidence of any value has been published in favour of the administration of purgatives in cholera. When, for example, a paper "On the Pathology and Treatment of Cholera," by Dr. George Johnson, was read at the Royal Medical and Chirurgical Society, April 23rd, 1867, in which "the necessity of a *cathartic* method of treatment, in the widest sense of that term," was strongly urged, no reference was made, either in the paper itself or in the debate which followed, to the results of the castor-oil treatment of the disease at King's College Hospital during the preceding epidemic; but a supplementary paper on the treatment of the disease at the Liverpool Parish Infirmary was brought forward on that occasion, and the two papers were afterwards published together in the succeeding volume of the Society's "Transactions." These papers are chiefly noticeable for the absence of any reference to the cases admitted into King's College Hospital under the exclusive care of Dr. George Johnson himself, and for the exceptional importance assigned to those treated at the Liverpool Parish Infirmary, which may, perhaps, be accounted for by what seems to have been a remarkable difference in the statistics of treatment at these two institutions; for whilst the mortality in the cases treated by castor oil at Liverpool is said to have been only 30 per cent., the mortality at King's College Hospital at the same date, and under the same treatment, appears, from the published hospital reports in THE LANCET of Nov. 17th, 1866, to have been 62 per cent.

Statistics, it must be admitted, possess only a limited value, and, unless used with caution, are often apt to mislead. It should not, therefore, be hastily assumed that the mortality at King's College Hospital was twice as great as it was at Liverpool, when the treatment adopted was essentially the same; for on analysing the Liverpool cases it will be found, as might indeed be expected from the title of the paper itself, "On the Treatment of Cholera and Epidemic Diarrhœa," that a large proportion of them, and especially of the cases which recovered, were not such as are commonly described as cases of cholera. When, therefore, the method of treatment "by castor oil alone" is said to have been followed by a mortality of 30 per cent., it must be admitted that the statistics on which such a favourable report rests are practically of little or no value unless the relative proportion of cholera and of diarrhœa cases can be satisfactorily ascertained. In the absence of this needful information, it can only be imperfectly inferred from the published report that if the cases of cholera had been kept distinct from those of diarrhœa the treatment "by castor oil alone" would not be found to have been more successful at Liverpool than it was in London, where, under the care of Dr. George Johnson, the average mortality was found to be about 62 per cent.: a result which closely agrees with the mortality of 63 per cent. observed on board the *Dreadnought* Hospital Ship in the preceding epidemic of cholera in 1854, when the same method of treatment was pursued (*Medical Times and Gazette*, Oct. 7th, 1854). It is, moreover, fully acknowledged by all who are acquainted with the subject that the purgative treatment of cholera has failed and is now very generally condemned in India, even by those who went from King's College Hospital prepared to carry it out to the fullest extent; and the entire absence of any satisfactory evidence in its favour is very remarkable in the newly revised lecture on Cholera by Sir Thomas Watson, which has just been published in anticipation of the disease (*British Medical Journal*, Aug. 5th, 1871), in which the Liverpool statistics appear to be alone available for quotation, and which have accordingly been cited, to the exclusion of those referred to above, including even the statistical returns of cholera at King's College Hospital itself.

With reference to the internal administration of an acid, and especially of phosphoric acid combined with ice, it may be here remarked that there are physiological arguments in favour of the treatment proposed, which I hope to have the opportunity of referring to more fully after the publication of my forthcoming paper on "Choleraic Glycosuria," an abstract of which has appeared in a former number of THE LANCET. The occurrence of glycosuria as a sequel of cholera, although strangely passed over in this country, has been somewhat carefully studied abroad; and it has served, perhaps more than any other recent contribution to the literature of the disease, to illustrate the truth of the well-approved axiom, that the higher we rise the wider becomes our horizon. For this and other scientific researches in chemical and microscopical pathology and in experimental physiology have helped a few inquirers both at home and abroad, who have devoted themselves without prejudice to the study of cholera, to reach, by successive steps in the right direction, a position from which it has become possible to obtain an insight, previously unattainable, into the nature of the disease. But here it must be finally admitted that any passing feeling of gratification at the progress which has been made in the scientific investigation of the disease should cease; for this higher view of the nature of cholera, which has been only lately attained, is not capable, when the disease occurs in its more malignant form, of inspiring any increased hope in our ability to avert it, or any increased confidence in our ability to cure it.

Yours truly,

WILLIAM SEDGWICK, M.R.C.S., &c.

Park-place, Upper Baker-street, August, 1871.

THE VACCINATION ACT AMENDMENT BILL.

FROM an assembly (says the *Pall Mall Gazette*) whose working hours are spent in debating whether a vote is a privilege or a trust, and whose leisure moments are employed in watching rhetorical sparring-matches ending in nothing between the leaders of the House, it is, perhaps, unreasonable to expect much display of zeal in improving our sanitary condition. But it is hardly too much to ask further brief consideration for a measure purporting to withdraw from us the greater portion of such protection as we possess at present against disease. In the Vaccination Act Amendment Bill the Government have seen fit to adopt one of the most questionable suggestions in the half-hearted report of the Vaccination Committee. The cumulation of penalties upon a parent for refusing to vaccinate his child, which, according to judicial interpretation of the Act of 1867, justices were empowered to impose, is put an end to by a clause enacting that after a second fine no further penalty shall be inflicted. This amounts practically to authorising the subject to compound for twenty shillings for the privilege of endangering the lives of the community.

*A Surgeon.*—The fee ought to be paid at the time or immediately after the holding of the inquest. Generally, we believe, the summoning officer calls within a few days, and gives the fee.

*T. F., R.N.*—The next examination will be held in November.

THE ADDRESS IN MEDICINE.

*To the Editor of* THE LANCET.

SIR,—I have read with much interest in your journal of last week the instructive address delivered by Dr. George Johnson to the members of the British Medical Association. For myself, I freely express my adhesion to the doctrine, so ably advocated by him, that a large number of diseases are caused or associated with blood-poisoning, that the morbid poisons and their products are eliminated by the various channels of excretion, and that their elimination is in the highest degree salutary and conservative in effect. As an example of this protective elimination, Dr. Johnson has cited the excretion of sugar in urine in diabetes. Now, although this illustration is undoubtedly appropriate, it appears to me that his explanation of the process by which this excretion is produced is fairly open to criticism on physiological grounds. I shall first of all reproduce Dr. Johnson's remarks on this subject, and then state my objections to them. "The persistent elimination of sugar by the kidneys," he observes, "has the effect of changing the structure and vital properties of their secreting cells, so that in adapting themselves, as it were, for the secretion of sugar, they gradually become unfitted for the discharge of their own proper function—namely, the secretion of urine. The renal gland-cells at length become opaque, and are found to contain a large amount of finely granular material with oily particles. The circulation through the kidney becomes impeded, the gland is congested, its secretion is albuminous, and suppression of urine is the immediate cause of death in a large proportion of cases of diabetes."

Now, in the first place, diabetic sugar (of which a colossal quantity is frequently void d by diabetics) is a highly diffusible crystalloid, and passes directly out of the blood combined or in union with the water of the urine by a purely physical process through the walls of the vessels of the Malpighian tufts into the uriniferous tubules; its excretion from the blood being inseparably associated with that of water, and in no way dependent on the vital act of secretion carried on by the renal gland-cells in the secretion of the ordinary solid constituents of the urine.

In the second place, impairment of the normal secreting function of the gland-cells of the kidneys, and albuminuria from disease, in diabetes, are by no means of such frequent occurrence as stated by Dr. Johnson. That they occur coincidently is a well-known fact; but it has yet to be proved that they stand in the relation of cause and effect. A diabetic condition of the urine may last for years without renal disease being produced. Amongst the numerous examples of diabetes which have come under my own observation in every stage of the disease, I have not in a single instance been able to detect albuminuria or other evidence of renal disease. On the contrary, it seems conclusively established by numerous well-known analyses that the functional activity of the secreting cells of the kidneys is often, if not generally, very much increased. These analyses (see Dr. Parkes on the Urine, p. 341) show an increase of urea even to double or treble the normal amount.

I am, Sir, yours, &c.,

Sunderland, August 14th, 1871. A. S. DONKIN, M.D.

CARBOLIC ACID IN DIPHTHERIA.

*Mr. W. Callaghan*, writing from Rockhampton, Queensland, Australia, wishes to call attention to the employment of carbolic acid in diphtheria, which he has used for two or three years with excellent results. He was first induced to give it a trial from the intolerable fetor that arose from the case he was then attending, and from the unsatisfactory results of the usual treatment. The formula that he has adopted is one part each of carbolic acid and glycerine to six parts of water, applied with a large-sized camel-hair pencil every second hour. Chlorate of potass, with zinc, chinchona, beef-tea, &c., are also used at the same time.

*Surgeon Jessop* (4th Hussars.)—We do not think that any purpose would be answered by the insertion of our correspondent's lengthy communication. He has mistaken our meaning. We did not imply that any doubts existed in his mind as to the nature of the disease at Labuan.

*Mr. J. King*, (Chelsea.)—We cannot undertake to nominate anyone. Let our correspondent take the opinion of his usual medical attendant on the question.

*Veterinarian.*—It is a term applied to a callus growing in the hollow circle of the little pastern of a horse, just above the coronet.

*M.R.C.P.*—Only by courtesy.

*One who is Duped* will, we trust, profit by the experience he has now had of the quacks.

POISONOUS DYES.

We perceive that this subject has recently caused some controversy in the pages of a daily journal. A considerable time has elapsed since we first directed attention to the circumstance that articles dyed with aniline were dangerous to wear. We subsequently ascertained the facts connected with a case in which a gentleman had his feet blistered, and was temporarily rendered lame, by wearing socks dyed with aniline. The blistering followed a definite pattern, which corresponded exactly with the coloured stripes upon the sock. There could not, therefore, be any reasonable doubt that it was attributable to some deleterious substance in the dye. Arsenic enters into the composition of, or is used as a mordant for, many of the aniline pigments, and when articles of dress thus coloured are worn next the skin, the arsenic becomes dissolved in the perspiration, and produces the vesication of the skin to which we have referred.

*Stammerer.*—We are not aware of the existence of any institution of the kind. Our correspondent is referred to the advertising columns of the back numbers of THE LANCET; the Rev. Alex. D'Orsey, Princes-square, the Rev. — Cazenave, and others.

THE communication of *Mr. W. Knight Treves* (Margate) shall have our attention.

*An Anxious Parent.*—It should be avoided.

THE PRELIMINARY EXAMINATIONS AT THE COLLEGE OF SURGEONS.

*To the Editor of* THE LANCET.

SIR,—It is quite time that the system of examination pursued at these examinations was brought before the profession and the public at large, who are equally interested in it. At the examination in December rather more than half the candidates were rejected. At the examination just passed the rejections were in the proportion of three in five! Now, Sir, such a state of things can be explained in either of three ways.

In the first, we must presume that the large majority of the young men who present themselves, and their parents (who have to bear the cost) are so indifferent, that they take no care in preparation, and that they go up or are sent up pell-mell and hap-hazard, trusting to the chapter of accidents to get through. I presume that you will agree with me that this is a proposition too monstrous to be entertained for a moment.

In the second, we must presume that the examination is such that lads of moderate abilities who have just left school cannot be fairly expected to pass.

Or, third, that the examinations are capricious, or not fairly conducted.

I have nothing to say as to the first cause of rejection, and your observations on the Chemical paper in your issue of July 8th, page 73, convey a significant proof that my second proposition is true. Is the paper propounded a fair paper in Elementary Chemistry? And are the questions such as a boy who has been educated in the country or a country town, where he has no opportunities of studying chemistry in a lecture-room or laboratory, could be fairly expected to answer? I appeal to your trenchant observations for an answer to this question, for I need go no further; but I must add that every boy who was rejected on his Chemical paper was unfairly rejected, and that every rejection on the Chemical paper ought to be rescinded. Your observations on Herr Langkopf and Herr Brietkopf furnish the answer to my third proposition.

Now, Sir, I write as the father of a boy rejected on this Chemical paper, and as such may be expected to write with some animus. My son was educated at the grammar school of a country town, where he had no opportunity of studying chemistry in a lecture-room or laboratory. For some months previous to his examination he read privately with the head master of an important King Edward's Grammar School, who has held that position for a number of years, and who took a high Wrangler's degree at Cambridge. He assured me before my boy went to London that he was thoroughly prepared; and on hearing of the rejection he, *proprio motu*, wrote me a letter, of which the following is a copy:—

"MY DEAR SIR,—It is with very great pain that I have heard of the failure of your son. I do not understand the principles on which an examination is conducted in which three men out of every five are rejected. I think, however, that they ought to be made known to the leading men of the medical profession. I am perfectly convinced that your son had sufficient knowledge to enable him to pass, and to pass with credit, any elementary examination of this kind. Yours very truly, ——."

Such is the testimony of a man of high scholarship, and the head master of an old endowed Grammar School; and yet my boy—and, doubtless, many others—is rejected, and his education deferred for a year, on the dictum of an anonymous theorist.

Now, Sir, I think that justice will not be done, and that the professional and public mind ought not to be satisfied, till they are informed of the names of the examiners in each branch of study propounded; and, secondly, till they have presented to them a table showing the number of rejections on each head of examination, so that we may know how many were rejected for Latin, how many for Mathematics, how many for Chemistry, and so on. This latter is due not only to the rejected, but to the future candidates, so that by knowing the points most insisted on they may be enabled to apply themselves with more diligence to the study of them. It would also be interesting to know how many lads were rejected on this *blessed* Chemical paper.

One other question suggests itself. A lad is compelled to take up a number of subjects. If he passes well on all but one, and shows some knowledge of that, is it fair to reject him? Are the College authorities looking forward to that Utopia when every candidate shall be a walking cyclopædia, and do they contemplate the *amount of cramming and the absence of knowledge* which such a consummation indicates?

We cannot expect the authorities to consider the bitter disappointment to pupils and parents, or the expense—*to many ruinous*—of these rejections by unfair papers, whereby education is deferred for fifteen months; but these are matters which ought to be considered. We all know what THE LANCET has done for the profession at large and the pupils during the last thirty years, and we may safely leave the matter in your hands.

Your obedient servant,

A HOSPITAL SURGEON AND COUNTY MAGISTRATE.

August, 1871.

### REPRESSION OF DRUNKENNESS IN FRANCE.

THE National Assembly is now discussing a Bill which aims at enacting penalties against this fearful vice, and it is to be hoped that some good will come of it. Heavy duties, fines, and even the gaol will, however, hardly meet the evil. Improvements as to early education, and the spread of morality by example, will go much further than punishments. A member of the Assembly, Dr. Theophilus Roussel, is so convinced of the necessity of such a repressive law that he read, on the 8th instant, before the Academy of Medicine a paper on the subject, which sets forth all the aspects of the results of intemperance. Nor is the Academy a stranger to such topics, as M. Jolly, well known for his writings against the excessive use of alcoholic drinks and tobacco, has again submitted to his colleagues valuable discourses, in which he endeavours to show how society would gain by limiting the use of strong beverages and tobacco.

*R. C. B.*—Next week if possible.

*Mr. A. C. Gray.*—The public delight in being gulled. We fear there is no remedy against the circulation of such pretensions.

### TREATMENT OF SNAKE-BITE.

*To the Editor of* THE LANCET.

SIR,—In 1869 you gave insertion to a letter of mine on this subject, in which I suggested the use of permanganate of potash and of carbolic and other acids by injection into the wound, in order to neutralise the poison. I observe in the *British Medical Journal* a statement copied from the *Journal de Médecine de l'Ouest*, to the effect that Dr. Weir Mitchell has made observations on the bite of the rattlesnake, proving that the application of *carbolic acid*, applied immediately on the receipt of the injury, completely neutralises the poison. A similar conclusion is arrived at by MM. Glequian and Viaud Grand-Marais with regard to the bite of the viper. Whatever may prove to be the result of treatment by injection of ammonia into the veins and of other forms of systemic treatment, it must be obvious that many lives are lost by the mere impossibility of a timely application of the remedies. To be thoroughly efficient, the antidote must be used *instantly* after the infliction of the wound. On this point there is no diversity of opinion. The backwoodsman must, as a rule, be far from medical aid, and ought therefore to carry his remedies with him. It is easy to do this. Half a dozen sealed capillary tubes, containing each ten drops of carbolic acid, or a saturated solution of permanganate of potash, and enclosed in a small wooden case, might be stowed in the waistcoat pocket, ready for use at all times. To break off the ends, insert the tube in the wound, and blow out the liquid, would take only a few seconds, and would, I think, ensure a safe recovery, or at the least mitigate the effect of the poison, and gain time for obtaining assistance by reducing the action and amount of the poison absorbed. It would be quite worth while for those who travel and live in countries where poisonous snakes abound to give this method a trial.

I have lately received a letter on this subject from a physician in Indiana, from which I make a brief extract relating to a new mode of treatment by chloroform:—

"We have many very dangerous kinds of reptile; but by far the most numerous and deadly are the *black* and *copperheaded* snakes, from which I have, on my hunting excursions, had some narrow escapes. By numerous experiments I have satisfactorily proved to my own mind, as well as to many of the profession here, that no antidote in existence but *chloroform* by inhalation, or *hydrate of chloral* in large doses, can be of any avail, and then only where the remedy can be applied instantaneously with the reception of the poison. ..... The absorption of the poison is so quick that death, with few exceptions, follows in five minutes."

I am, Sir, yours obediently,

Lynn, August 7th, 1871. JOHN LOWE, M.D.

*A Working Man.*—It would not be easy to answer our correspondent's question within the space at our disposal. Let him consult any modern work on Physiology—that by Prof. Huxley, for example, published by Macmillan. There is no book treating of the subject alluded to in our correspondent's second question.

*X. Y. Z.*—The use of the term "herpes circinatus," as applied to vegetable parasitic disease of the general surface of the body, has given place to that of "tinea circinata," in accordance with the new nomenclature of the College of Physicians.

### DIFFICULT MIDWIFERY.

*To the Editor of* THE LANCET.

SIR,—In last week's number of your journal I notice that Dr. Ross, in his "Report of Three Obstetrical Cases of an Unusual Character," quotes a case of puerperal convulsions treated by chloroform and version. In summing-up, he gives the opinion of some of our great authors with regard to the propriety of bleeding in the above disease, and says "there is a great diversity of opinion as to the propriety of bleeding, as, on the one hand, we have Churchill, Johnson, Sinclair, Ramsbotham, &c., strongly recommending it; and, on the other hand, the late Sir J. Y. Simpson, Braun, Barnes, &c., all equally averse to it." My object in writing this is to correct Dr. Ross in his statement as to Sir J. Y. Simpson being averse to bleeding. The heads of his plan of treatment were as follows:—Loosen the dress; raise the head; put something, such as a towel or cork, between the teeth; and allow plenty of fresh air. With regard to bleeding he says: "Formerly all were bled to a great degree, twenty to forty ounces. This is done away with a good deal; but we do bleed here more than in any other disease. Always bleed when the face is blue and congested, which it generally is. Subdue over-excitability of the nervous system by chloroform. Act, if possible, on the kidneys by acetate of potash and acetic acid. Apply cold to the head. If in labour, and passages in a fit state, use forceps, particularly if repeated paroxysms. If the head is high, and the passages unprepared, rely on relaxants and time; but if danger imminent, deliver by long forceps, turning, embryulcia," &c. &c.

I have myself more than once seen great good follow a moderate bleeding, and I think in Dr. Ross's case consciousness would have returned much sooner had he taken away a small quantity of blood.

Yours faithfully,

Congleton, August 14th, 1871. J. T. W. BAIRD, M.B., C.M.

### CHOLERAIC DIARRHŒA.

WE have received one or two communications describing cases of supposed cholera occurring in London; but we regret we cannot give them publication, for we should thereby seem to confirm the view that these cases were actually instances of true cholera; and from a careful perusal of the particulars sent us, we are convinced that the cases are nothing but instances of what is termed—we think very unwisely—choleraic diarrhœa.

### INFANT MORTALITY.

*To the Editor of* THE LANCET.

SIR,—Having been interested in Dr. F. R. Hogg's contributions to your journal on soldiers' wives and children, allow me to add an additional case to those he has collected on infant mortality, the facts of which were related to me by the mother (a soldier's wife) in the summer of 1869. She had borne five children, all apparently healthy for the first two or three months, but all dying about the time they were weaned, from hydrocephalus accompanied with convulsions: the first four in India, the last in Edinburgh. It was during my attendance on the last-mentioned that I received the above history; and I may state that both parents were remarkably healthy, nor was there any suspicion of syphilitic taint on either side, or any other constitutional disease.

Your obedient servant,

Tongue, August, 1871. JOHN MOIR, L.R.C.P. Ed.

### ADVICE ON EASY TERMS.

THE following is one attempt to solve the difficulty of bringing great services within the reach of persons of small means:—

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